United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
the University of Florida,
Institute of Food and
Agricultural Sciences,
Agricultural Experiment
Stations, and
Soil and Water Science
Department; and
the Florida Department of
Agriculture and Consumer
Services

# Soil Survey of Taylor County, Florida

# How to Use This Soil Survey

**General Soil Map**

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

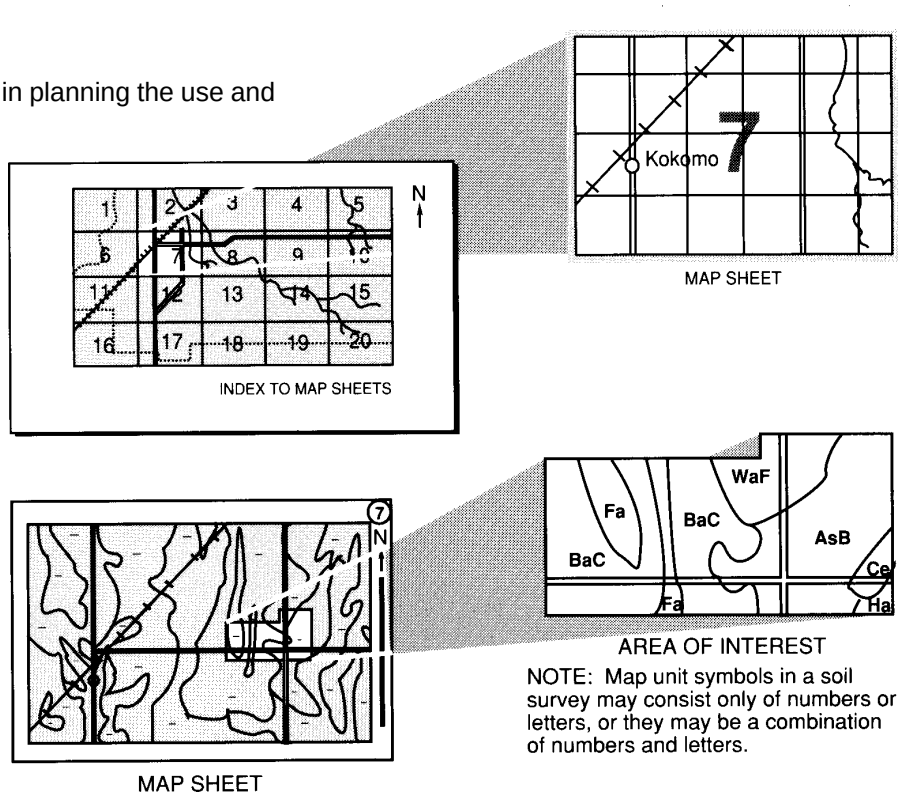
**Detailed Soil Maps**

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.




NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1994. Soil names and descriptions were approved in 1998. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1995. This survey was made cooperatively by the Natural Resources Conservation Service and the University of Florida's Institute of Food and Agricultural Sciences, Agricultural Experiment Stations, and Soil and Water Science Department; the Florida Department of Agriculture and Consumer Services; and the Florida Department of Transportation. The survey is part of the technical assistance furnished to the Taylor County Soil and Water Conservation District. The Taylor County Board of County Commissioners contributed office space for the soil survey project office.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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**Cover: A nursery in an area of Ortega fine sand, 0 to 5 percent slopes, where pine seeds are planted and grown to seedlings.**

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# Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations that affect various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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State Conservationist
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# Soil Survey of
# Taylor County, Florida

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations, and Soil and Water Science Department; and the Florida Department of Agriculture and Consumer Services

TAYLOR COUNTY is on the coast of the Gulf of Mexico in the northwestern part of the Florida Peninsula (fig. 1). It is bordered on the north by Madison County, on the west by Jefferson County, on the south by Dixie County, and on the east by Lafayette County. Taylor County has an irregular outline; the Acuilla River forms part of the western border, and the Steinhatchee River forms part of the southern border.

The total area of the county, including areas of water, is 667,700 acres, or 1,055 square miles. The county is about 44 miles long from north to south and 37 miles from east to west.

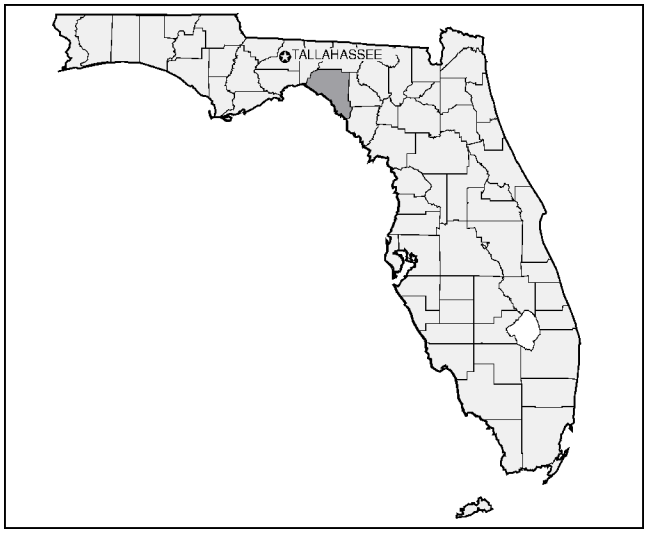


**Figure 1.—Location of Taylor County in Florida.**

## General Nature of the County

This section gives general information about the county. It describes the climate, seasonal high water tables, history and development, farming, transportation facilities, and mineral resources.

### Climate

The climate in Taylor County is characterized by long, hot, humid summers and mild winters (USDC, 1990). It is favorable for the production of crops, livestock, and pine trees. The moderating influence of the Gulf of Mexico on maximum temperatures in summer and on minimum temperatures in winter is pronounced along the coast but diminishes a few miles inland.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Perry, Florida, for

the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 57 degrees F and the average daily minimum temperature is 44 degrees F. The lowest temperature on record, which occurred at Perry on January 21, 1985, is 7 degrees F. In summer, the average temperature is 81 degrees and the average daily maximum temperature is 91 degrees. The highest recorded temperature, which occurred on July 15, 1980, is 104 degrees F.

Of the total annual precipitation, 36 inches, or 62 percent, usually falls in April through September, which includes the growing season for most crops. In 2 years out of 10, the rainfall in April through September is less than 19 inches. The heaviest 1-day rainfall during the period of record was 10.26 inches at Perry on July 25, 1980. Thunderstorms occur on about 83 days each year, and most occur in summer.

Growing degree days, shown in table 1, are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

Snowfall is rare. No measurable snowfall occurs in 99 percent of the winters. In 1 percent, the snowfall, usually of short duration, is less than 1 inch.

The average relative humidity in midafternoon is about 55 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The sun shines 65 percent of the time possible in summer and 60 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 8 miles per hour, in spring.

Every few years a tropical storm or hurricane affects the area. During a two or three day period, 15 or more inches of precipitation can fall.

## Seasonal High Water Tables

The seasonal high water table is the depth to free water that stands in an unlined borehole for a significant period of time (more than a few weeks) during the wettest seasons of the year. In Taylor County, the soils typically are wettest from late December through March and from June through September. These wet periods correspond to the seasonally highest periods of rainfall. More rain falls in the summer than in the winter; however, more evapotranspiration occurs in the summer (SSSA, 1997). The driest part of the year is October through the first part of December. This dry period corresponds to the seasonally lowest period of rainfall. The second driest part of the year is April and May. During these months evapotranspiration rates are much greater than in the winter, and although more rain falls than in November and early December, less rain falls than in winter or summer.

## History and Development

Mary Lou Whitfield, historian, prepared this section.

Indians occupied Florida for thousands of years before the arrival of the first European explorers. The Indians were from five main groups: the Timucua, Apalachee, Ais, Tekesta, and Calusa. The Timucua Indians, who had fifteen different tribes, occupied the area that is now Taylor County (Fernald, 1981).

In 1513, Juan Ponce de Leon landed on the coast of what is now northeastern Florida and was credited with discovering Florida. He named the land La Florida (La-Flor-EE-da) for Pascua Florida, Spain's Easter Feast of the Flowers (Florida Department of State, n.d.). When Spain lost control of the area to the English in 1762, the Timucuan Indians lost their tribal identify and were absorbed by the Seminole Indian tribe. Spain regained possession of the area in 1783 and encouraged migration into Florida through land grants.

The early Spanish explorers are believed to have established a mission on the lower Fenholloway River in the area now known as the Thomas Mill Hammock (Cash, 1948).

During the settlement period, the area supported a tribe of Seminole Indians whom the settlers considered a constant source of peril. General Andrew Jackson was sent to punish these Seminole Indians for their raids. His troops engaged them at Natural Bridge on the Econfina River on April 12, 1818 (Cash, 1948). No other fighting in Taylor County was reported.

Florida became an American territory in 1821.

In 1838, General Zachary Taylor, for whom the county was later named, commanded troops against the warring Seminole Indians during the Seminole Indian War of 1835–1842. He and his troops built five forts on the Econfina, Fenholloway, and Steinhatchee Rivers.

Florida became a state on March 3, 1845.

In the early 1850's, the first settlement, "Pisgah," was established. A post office named "Fenholloway" was established at Pisgah on May 6, 1854. It is possible that one of the houses in Pisgah was the first house in Taylor County made from sawed lumber instead of being of log construction. This house was

used in the later part of the Civil War as headquarters for Confederate Major Charles H. Canfield.

Taylor County, named in honor of President Zachary Taylor, was partitioned from Madison County on December 23, 1856, as Florida's 34th county. In 1860, the first census of the county reported the population at 1,384. The next census showed an increase of 99.

A post office named "Rose Head" was established in the county on February 23, 1869. On May 28, 1875, the name was changed to Perry.

The first turpentine still was built in 1899 about 5 miles north of Perry. Gum rosin was produced from the large areas of virgin slash pine and longleaf pine in the county.

The first railroad to enter the county was the South Georgia Railway. It entered the county in 1902 from the north. Other railroads entered the county to transport timber products in the early 1900's from the east and south. The only railroad still in the county is the Southern Railway System, which uses the old route of the South Georgia Railway.

Taylor County has grown slowly over the years. It has remained mostly rural, dependent upon commercial woodland production and agriculture. The 1990 census reported a population of 20,002. Of this total, 8,231 were in the city of Perry.

## Farming

Mary Lou Whitfield, historian, prepared this section.

The favorable climate and soils in Taylor County attracted settlers from the southeastern states from about 1815 to the late 1820's and early 1830's. During the Civil War, beef cattle, hogs, and sugarcane were grown for the troops. Also, salt was produced from boiled-down seawater.

In the 1870's, agriculture in the county consisted of small farms raising scrub cattle and hogs on an open range. Cedar trees were cut along coastal swamps and then dragged by teams of oxen or floated in streams to the Gulf of Mexico. These cedar logs were rafted to Cedar Key for processing into pencils.

The first timber mills in Taylor County processed red cypress, yellow pine, or both. Pine was used for building homes and other buildings; oak and cedar were used for furniture. The wood was also processed for automobile parts and skiing equipment.

Cotton was grown in the county following the Civil War. It thrived until 1916 when the Mexican boll weevil all but wiped it out.

In the 1920's, dipping cattle became compulsory for the eradication of the Texas fever tick and thousands of range cattle were sold off. These cattle were restocked with Brahma, Hereford, and Angus beef cattle, resulting in improved herds. Several dairy herds of Jerseys and Guernseys were in operation for a time.

In 1940, statewide legislation required fencing livestock off public highways. In 1964, a county referendum required stockholders to keep their stock within fenced-in areas. This brought the open range to a close.

In the early 1950's, a cellulose plant was established at Foley, the former location of a wood-pulp processing plant.

A wide variety of crops, including flue-cured tobacco, corn, watermelons, peanuts, soybeans, peaches, wheat, oats, rye grains, and field peas have been grown in the county. These crops are still grown in the county. Most of the cropland, however, has been converted to pasture or the production of pine.

More than 20,500 acres in the county is used for crops and pasture (University of Florida, 1994). The acreage used for crops and pasture has gradually decreased as land is used for urban development and timber production.

## Transportation Facilities

Taylor County is served by a good network of county, State, and Federal highways. U.S. Highway 19 crosses the county in a north-south route, U.S. Highway 27 crosses the county in a north-east route, U.S. Highway 98 crosses the county in a west-south route, and U.S. Highway 221 crosses the county north from Perry. All of the highways pass through the Perry. They generally follow the same routes as the first "hardroads" constructed beginning in 1916. Numerous forestry roads have been built throughout the county. They facilitate the growing and harvesting of timber and reforestation. They provide transportation to most areas of the county.

The Seaboard Coast Line Railroad provides freight transportation northward from Perry using the route of the South Georgia Railway, which was the first railroad to enter the county.

Regularly scheduled commercial air transportation is not available in the county. A small local airport is in Perry.

## Mineral Resources

Taylor County contains deposits of several economic mineral commodities. The most important of these is dolostone. Other minerals of lesser potential include limestone and sand. The economic potential and mining status of each commodity are summarized in the following paragraphs (Spencer, 1996).

**Figure 2.—An area of Wekiva-Tennille-Tooles complex, occasionally flooded, where the limestone bedrock is quarried for lime. Lime is used to raise soil reaction and for road construction.**

### Dolomite

Shallow, dolomitized Suwannee Limestone is present in the Cabbage Grove area (Townships 3 and 4 South; Ranges 4, 5, and 6 East) in the northwestern part of Taylor County (fig. 2). This area is one of only about five high-quality dolomite producing areas in Florida (Schmidt, 1979). The dolomite in Taylor County is mined primarily for use as road gravel. The rock is extracted by dragline, crushed onsite, and trucked to customers. Four companies operate in the Cabbage Grove area.

Elsewhere in the county, private pits produce dolomite on a sporadic, as-needed basis. The Florida Department of Transportation operates a road-base pit in Section 4, Township 5 South, Range 5 East, and a private construction company maintains a pit southwest of Perry. Although sufficient dolomite reserves for continued commercial mining are present in Taylor County, the lack of more extensive local markets for the product precludes an extensive industry in this commodity.

### Limestone

The Ocala Limestone is near the surface under the southernmost part of Taylor County. The economic grade varies considerably from one area to another. Although mining potential remains high, no companies commercially mine limestone in the county. A private construction company operates a private pit in the Suwannee Limestone southwest of Perry, and another corporation maintains two private road-base pits in the southeastern part of the county. Low local demand precludes extensive mining of this mineral.

### Sand

A number of shallow private pits in Taylor County produce fill sand. Pleistocene quartz sand deposits are present as a blanket of variable thickness over most of the county. Because of low local demand for sand products, the potential for commercial mining is low.

### Clay

Clay is sporadically present as a component of the undifferentiated surficial sediments covering Taylor County. Due to the impure nature of the clay, it is not an economic commodity in the county.

### Peat

Peat forms in a wet, reducing environment when the rate of accumulation of organic materials exceeds the

rate of decomposition. Shallow wetlands in the San Pedro Bay region in the northeastern part of Taylor County provide potential sites of peat formation. Although a peat survey has not been conducted in the county, studies in adjacent counties indicate that the peat formed in such areas is too thin to be of economic interest (Davis, 1946; Bond, 1986).

## How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock (USDA, National Soil Survey Handbook; USDA, 1993). They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

The descriptions, names, and delineations of the

soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

## Map Unit Composition

A map unit delineation on a soil map represents an area dominated by one major kind of soil or an area dominated by several kinds of soil. A map unit is identified and named according to the taxonomic classification of the dominant soil or soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural objects. In common with other natural objects, they have a characteristic variability in their properties. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of soils of other taxonomic classes. Consequently, every map unit is made up of the soil or soils for which it is named and some soils that belong to other taxonomic classes. In the detailed soil map units, these latter soils are called inclusions or included soils. In the general soil map units, they are called minor soils.

Most inclusions have properties and behavioral patterns similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting (similar) inclusions. They may or may not be mentioned in the map unit descriptions. Other inclusions, however, have properties and behavior divergent enough to affect use or require different management. These are contrasting (dissimilar) inclusions. They generally occupy small areas and cannot be shown separately on the soil maps because of the scale used in mapping. The inclusions of contrasting soils are mentioned in the map unit descriptions. A few inclusions may not have been observed and consequently are not mentioned in the descriptions, especially where the soil pattern was so complex that it was impractical to make enough observations to identify all of the kinds of soils on the landscape.

The presence of inclusions in a map unit in no way diminishes the usefulness or accuracy of the soil data. The objective of soil mapping is not to delineate pure taxonomic classes of soils but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but onsite investigation is needed to plan for intensive uses in small areas.

# General Soil Map Units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

## Soils on Rises and Knolls and in Depressions

### 1. Ortega-Kershaw-Ridgewood

*Very deep, moderately well drained, excessively drained, and somewhat poorly drained soils that formed in sandy and loamy marine sediments on the lower Coastal Plain*

#### *Setting*

*Location:* Southwestern part of the county
*Landscape:* Lowlands
*Landform:* Rises, knolls, and depressions
*Slope:* 0 to 8 percent

#### *Composition*

*Percent of the survey area:* 8.4
Ortega soils—56 percent
Kershaw soils—18 percent
Ridgewood soils—11 percent
Minor soils—15 percent

#### *Soil Characteristics*

**Ortega**
*Surface layer:* Gray fine sand
*Substratum:* Very pale brown, light yellowish brown, and white fine sand
*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Depth to seasonal high water table:* 42 to 72 inches
*Slope:* 0 to 5 percent
*Parent material:* Sandy marine sediments

**Kershaw**
*Surface layer:* Dark grayish brown fine sand
*Substratum:* Yellowish brown, brownish yellow, and very pale brown fine sand
*Depth class:* Very deep
*Drainage class:* Excessively drained
*Depth to seasonal high water table:* More than 72 inches
*Slope:* 0 to 8 percent
*Parent material:* Sandy marine sediments

**Ridgewood**
*Surface layer:* Grayish brown fine sand
*Substratum:* Yellowish brown, light yellowish brown, and light gray fine sand
*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Depth to seasonal high water table:* 18 to 42 inches
*Slope:* 0 to 3 percent
*Parent material:* Sandy marine sediments

**Minor soils**
- Clara, Osier, and Pottsburg soils on flats
- Leon and Mandarin soils in areas of flatwoods
- Albany, Hurricane, Otela, and Resota soils on rises and knolls

#### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Equipment limitations, seedling mortality, plant competition

**Cropland**
*Management concerns:* Droughtiness, fast intake, wetness

**Pasture and hayland**
*Management concerns:* Droughtiness, fast intake, wetness

**Urban development**
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, corrosivity

## 2. Ridgewood-Pamlico-Ortega

*Very deep, somewhat poorly drained, very poorly drained, and moderately well drained soils that formed in sandy marine sediments and highly decomposed organic material on the lower Coastal Plain*

### *Setting*

*Location:* Throughout the county
*Landscape:* Lowlands
*Landform:* Ridgewood and Ortega—rises and knolls; Pamlico—depressions
*Slope:* 0 to 5 percent

### *Composition*

*Percent of the survey area:* 7.2
Ridgewood soils—31 percent
Pamlico soils—12 percent
Ortega soils—11 percent
Minor soils—46 percent

### *Soil Characteristics*

**Ridgewood**
*Surface layer:* Grayish brown fine sand
*Substratum:* Yellowish brown, light yellowish brown, and light gray fine sand
*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Depth to seasonal high water table:* 18 to 42 inches
*Slope:* 0 to 3 percent
*Parent material:* Sandy marine sediments

**Pamlico**
*Surface layer:* Dark brown muck
*Subsurface layer:* Black and dark reddish brown muck
*Substratum:* Black mucky fine sand and brown fine sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 24 inches above the surface
*Slope:* 0 to 1 percent
*Parent material:* Highly decomposed organic matter

**Ortega**
*Surface layer:* Gray fine sand
*Substratum:* Very pale brown, light yellowish brown, and white fine sand
*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Depth to seasonal high water table:* 42 to 72 inches
*Slope:* 0 to 5 percent
*Parent material:* Sandy marine sediments

**Minor soils**
- Chipley, Hurricane, and Kershaw soils on rises and knolls
- Leon, Melvina, and Mandarin soils in areas of flatwoods
- Clara soils on flats and in areas of flatwoods
- Evergreen, Pamlico, and Wesconnett soils in depressions

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Ridgewood and Ortega—droughtiness, fast intake, wetness, equipment limitations, seedling mortality, plant competition; Pamlico—not suited

**Cropland**
*Management concerns:* Ridgewood and Ortega—droughtiness, fast intake, wetness; Pamlico—not suited

**Pasture and hayland**
*Management concerns:* Ridgewood and Ortega—droughtiness, fast intake, wetness; Pamlico—not suited

**Urban development**
*Management concerns:* Ridgewood and Ortega—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, corrosivity; Pamlico—not suited

## 3. Albany-Otela-Surrency

*Very deep, somewhat poorly drained, moderately well drained, and very poorly drained soils that formed in sandy and loamy marine sediments on the lower Coastal Plain*

### *Setting*

*Location:* In and north of Perry
*Landscape:* Lowlands
*Landform:* Albany and Otela—rises and knolls; Surrency—depressions

*Slope:* 0 to 5 percent

### *Composition*

*Percent of the survey area:* 1.9
Albany soils—29 percent
Otela soils—22 percent
Surrency soils—12 percent
Minor soils—37 percent

### *Soil Characteristics*

**Albany**
*Surface layer:* Dark grayish brown sand
*Subsurface layer:* Grayish brown, very pale brown, and light gray sand
*Subsoil:* Pale brown fine sandy loam and light gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Depth to seasonal high water table:* 12 to 30 inches
*Slope:* 0 to 5 percent
*Parent material:* Sandy and loamy marine sediments

**Otela**
*Surface layer:* Dark brown fine sand
*Subsurface layer:* Brownish yellow, very pale brown, and yellowish brown fine sand to loamy fine sand
*Subsoil:* Yellowish brown fine sandy loam and gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Depth to seasonal high water table:* 48 to 72 inches
*Slope:* 0 to 5 percent
*Parent material:* Sandy and loamy marine sediments

**Surrency**
*Surface layer:* Black mucky fine sand
*Subsurface layer:* Light gray fine sand
*Subsoil:* Gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 12 inches above the surface
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Minor soils**
- Ortega and Otela soils on rises and knolls
- Plummer soils on flats and in areas of flatwoods
- Croatan and Starke soils in depressions

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Albany and Otela—equipment limitations, seedling mortality, plant competition; Surrency—not suited

**Cropland**
*Management concerns:* Albany and Otela—droughtiness, fast intake, wetness: Surrency—not suited

**Pasture and hayland**
*Management concerns:* Albany and Otela—droughtiness, fast intake, wetness: Surrency—not suited

**Urban development**
*Management concerns:* Albany and Otela—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, corrosivity; Surrency—not suited

## Soils in Areas of Flatwoods, on Flats, in Depressions, and on Flood Plains

### 4. Leon-Pamlico-Wesconnett

*Very deep, poorly drained and very poorly drained soils that formed in sandy marine sediments and highly decomposed organic material on the lower Coastal Plain*

### *Setting*

*Location:* Throughout the county
*Landscape:* Lowlands
*Landform:* Leon—flatwoods; Pamlico and Wesconnett—depressions
*Slope:* 0 to 2 percent

### *Composition*

*Percent of the survey area:* 22.2
Leon soils—34 percent
Pamlico soils—14 percent
Wesconnett soils—9 percent
Minor soils—43 percent

### *Soil Characteristics*

**Leon**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Grayish brown and light gray fine sand
*Subsoil:* Black and dark reddish brown fine sand
*Substratum:* Dark yellowish brown and yellowish brown fine sand
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Depth to seasonal high water table:* 6 to 18 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy marine sediments

**Pamlico**
*Surface layer:* Dark brown muck
*Subsurface layer:* Black and dark reddish brown muck
*Substratum:* Black mucky fine sand and brown fine sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 24 inches above the surface
*Slope:* 0 to 1 percent
*Parent material:* Highly decomposed organic matter

**Wesconnett**
*Surface layer:* Black fine sand
*Subsoil:* Very dark gray, dark reddish brown, and brown fine sand
*Substratum:* Light gray fine sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 24 inches above the surface
*Slope:* 0 to 2 percent
*Parent material:* Sandy marine sediments

**Minor soils**
- Hurricane and Ridgewood soils on rises and knolls
- Mascotte soils in areas of flatwoods
- Clara, Bodiford, and Plummer soils on flats and in areas of flatwoods
- Croatan soils in depressions

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Leon—equipment limitations, seedling mortality, plant competition; Pamlico and Wesconnett—not suited

**Cropland**
*Management concerns:* Leon—wetness, droughtiness, fast intake; Pamlico and Wesconnett—not suited

**Pasture and hayland**
*Management concerns:* Leon—wetness, droughtiness, fast intake; Pamlico and Wesconnett—not suited

**Urban development**
*Management concerns:* Leon—wetness, poor filter, seepage, too sandy, cutbanks cave, corrosivity; Pamlico and Wesconnett—not suited

## 5. Chaires-Meadowbrook-Clara

*Very deep, poorly drained soils that formed in sandy and loamy marine sediments on the lower Coastal Plain*

### *Setting*

*Location:* Throughout the county
*Landscape:* Lowlands
*Landform:* Chaires—flatwoods; Meadowbrook and Clara—flats and depressions
*Slope:* 0 to 2 percent

### *Composition*

*Percent of the survey area:* 9.5
Chaires soils—33 percent
Meadowbrook soils—11 percent
Clara soils—10 percent
Minor soils—46 percent

### *Soil Characteristics*

**Chaires**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Light brownish gray fine sand
*Upper part of the subsoil:* Black and dark reddish brown fine sand
*Next part of the subsoil:* Dark yellowish brown fine sand
*Lower part of the subsoil:* Light gray and light olive gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Depth to seasonal high water table:* 6 to 18 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Meadowbrook**
*Surface layer:* Dark grayish brown sand
*Subsurface layer:* Very pale brown and light gray fine sand
*Subsoil:* Light brownish gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Seasonal high water table:* At the surface to a depth of 12 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Clara**
*Surface layer:* Very dark grayish brown mucky fine sand
*Subsurface layer:* Grayish brown fine sand
*Subsoil:* Yellowish brown fine sand
*Substratum:* Light gray fine sand
*Depth class:* Very deep
*Drainage class:* Poorly drained

*Seasonal high water table:* At the surface to a depth of 12 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy marine sediments

**Minor soils**
- Lutterloh and Moriah soils on rises and knolls
- Leon, Mandarin, and Melvina soils in areas of flatwoods
- Clara, Bodiford, Meadowbrook, and Tooles soils on flats and in areas of flatwoods
- Maurepas, Tooles, and Yellowjacket soils in depressions and on flood plains

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Equipment limitations, seedling mortality, plant competition

**Cropland**
*Management concerns:* Wetness, droughtiness, fast intake

**Pasture and hayland**
*Management concerns:* Wetness, droughtiness, fast intake

**Urban development**
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, corrosivity

## 6. Sapelo-Surrency-Plummer

*Very deep, poorly drained and very poorly drained soils that formed in sandy and loamy marine sediments on the lower Coastal Plain*

### *Setting*

*Location:* Northern part of the county
*Landscape:* Lowlands
*Landform:* Flats and depressions
*Slope:* 0 to 2 percent

### *Composition*

*Percent of the survey area:* 10.3
Sapelo soils—31 percent
Surrency soils—10 percent
Plummer soils—8 percent
Minor soils—51 percent

### *Soil Characteristics*

**Sapelo**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Gray and light gray fine sand
*Subsoil:* Black and dark reddish brown fine sand
*Second subsurface layer:* Light gray fine sand
*Second Subsoil:* Light brownish gray sandy clay loam and light olive gray fine sandy loam
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Depth to seasonal high water table:* At the surface to a depth of 18 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Surrency**
*Surface layer:* Black mucky fine sand
*Subsurface layer:* Light gray fine sand
*Subsoil:* Gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 12 inches above the surface
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Plummer**
*Surface layer:* Black fine sand
*Subsurface layer:* Grayish brown, gray, and light gray fine sand
*Subsoil:* Gray fine sandy loam
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Depth to seasonal high water table:* At the surface to a depth of 12 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Minor soils**
- Albany soils on rises and knolls
- Leon and Sapelo soils in areas of flatwoods
- Croatan, Dorovan, and Pamlico soils in depressions and on flood plains
- Starke soils in depressions

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Sapelo and Plummer—equipment limitations, seedling mortality, plant competition; Surrency—not suited

**Cropland**
*Management concerns:* Sapelo and Plummer—wetness, droughtiness, fast intake; Surrency—not suited

**Pasture and hayland**
*Management concerns:* Sapelo and Plummer—wetness, droughtiness, fast intake; Surrency and Starke—not suited

**Urban development**
*Management concerns:* Sapelo and Plummer—wetness, poor filter, seepage, too sandy, cutbanks cave, corrosivity; Surrency and Starke—not suited

## 7. Wekiva-Tooles-Chaires and Similar Soils

*Shallow to very deep, poorly drained soils that formed in sandy and loamy marine sediments over limestone on the lower Coastal Plain*

### *Setting*

*Location:* Inland along the Gulf Coast
*Landscape:* Lowlands
*Landform:* Wekiva—flats; Tooles—flats and depressions; Chaires—flatwoods
*Slope:* 0 to 2 percent

### *Composition*

*Percent of the survey area:* 23.1
Wekiva soils—21 percent
Tooles soils—19 percent
Chaires soils—14 percent
Minor soils—46 percent

### *Soil Characteristics*

**Wekiva**
*Surface layer:* Black fine sand
*Subsurface layer:* Yellowish brown fine sand
*Subsoil:* Yellowish brown fine sandy loam
*Bedrock:* Limestone
*Depth class:* Shallow and moderately deep
*Drainage class:* Poorly drained
*Seasonal high water table:* At the surface to 12 inches above surface
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Tooles**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Brown and yellowish brown fine sand
*Subsoil layer:* Light gray sandy clay loam
*Bedrock:* Limestone
*Depth class:* Deep
*Drainage class:* Poorly drained
*Seasonal high water table:* At the surface to 12 inches above surface
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Chaires**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Light brownish gray fine sand
*Subsoil:* Black, dark reddish brown, and yellowish brown fine sand
*Second subsurface layer:* Dark yellowish brown fine sand
*Second subsoil:* Light gray and light olive gray sandy clay loam
*Depth class:* Very deep
*Drainage class:* Poorly drained
*Depth to seasonal high water table:* 6 to 18 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Minor soils**
- Bushnell, Lutterloh, Matmon, Moriah, and Seaboard soils on rises and knolls
- Chaires and Melvina soils in areas of flatwoods
- Bodiford, Bushnell, and Nutall soils on flats and in depressions

### *Use and Management*

**Major use:** Woodland

**Woodland**
*Management concerns:* Equipment limitations, seedling mortality, plant competition

**Cropland**
*Management concerns:* Wetness, droughtiness, fast intake

**Pasture and hayland**
*Management concerns:* Wetness, droughtiness, fast intake

**Urban development**
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, corrosivity

# Soils in Depressions, on Flood Plains, and in Tidal Marshes

## 8. Dorovan-Pamlico-Sapelo

*Very deep, very poorly drained soils that formed in highly decomposed organic material and sandy marine sediments on the lower Coastal Plain*

### *Setting*

*Location:* Northern and eastern parts of the county
*Landscape:* Lowlands
*Landform:* Flats and depressions
*Slope:* 0 to 2 percent

### *Composition*

*Percent of the survey area:* 13.0
Dorovan soils—38 percent
Pamlico soils—26 percent
Sapelo soils—15 percent
Minor soils—21 percent

### *Soil Characteristics*

**Dorovan**
*Surface layer:* Very dark brown muck
*Subsurface layer:* Black muck
*Substratum:* Black mucky fine sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 24 inches above the surface
*Slope:* 0 to 1 percent
*Parent material:* Highly decomposed organic matter

**Pamlico**
*Surface layer:* Dark brown muck
*Subsurface layer:* Black and dark reddish brown muck
*Substratum:* Black mucky fine sand and brown fine sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to 24 inches above the surface
*Slope:* 0 to 1 percent
*Parent material:* Highly decomposed organic matter

**Sapelo**
*Surface layer:* Very dark gray fine sand
*Subsurface layer:* Gray and light gray fine sand
*Subsoil:* Black and dark reddish brown fine sand
*Second subsurface layer:* Light gray fine sand
*Second subsoil layer:* Light brownish gray sandy clay loam and light olive gray fine sandy loam
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to a depth of 18 inches
*Slope:* 0 to 2 percent
*Parent material:* Sandy and loamy marine sediments

**Minor soils**
- Ridgewood soils on rises and knolls
- Leon soils on flats and in depressions

### *Use and Management*

**Major uses:** Not suited to woodland, cropland, pasture, hayland, or urban development

## 9. Bayvi

*Very deep, very poorly drained soils that formed in sandy marine sediments on the lower Coastal Plain*

### *Setting*

*Location:* Southern and western parts of the county bordering the Gulf of Mexico
*Landscape:* Lowlands (fig. 3)
*Landform:* Salt marshes
*Slope:* 0 to 1 percent

### *Composition*

*Percent of the survey area:* 4.4
Bayvi soils—81 percent
Minor soils—19 percent

### *Soil Characteristics*

**Bayvi**
*Surface layer:* Black muck
*Subsurface layer:* Black mucky loamy sand and very dark grayish brown sand
*Substratum:* Grayish brown and gray sand
*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Seasonal high water table:* At the surface to a depth of 6 inches
*Slope:* 0 to 1 percent
*Parent material:* Sandy marine sediments

**Minor soils**
- Chaires and Leon soils in areas of flatwoods

### *Use and Management*

**Major uses:** Not suited to woodland, cropland, pasture, hayland, or urban development

# Broad Land Use Considerations

The soils in the Taylor County vary in their suitability for major land uses. About 87 percent of the acreage is used for the production of pine trees. Much of the acreage in general soil map units 4, 5, and 6 is used for woodland. The seasonal high water table is the main limitation. Because of wetness, the equipment limitations are moderate or severe on these soils. The wetness can be overcome by harvesting only during the drier periods or by using special equipment.

The soils in units 7, 8, and 9 are frequently flooded, ponded, or both, mainly in winter and summer. Flooding, ponding, and wetness are the major limitations affecting these units for most uses.

Only a small acreage in the county is used for pasture. Units 4, 5, and 6 are best suited to grasses.

**Figure 3.—An area of water in the foreground; Bayvi muck, frequently flooded, in the middle; and Leon fine sand, rarely flooded in the background. These areas provide recreational opportunities. Photo courtesy of Will Beers, photographer.**

Soils in units 1, 2, and 3 are generally unsuited to grasses because of droughtiness.

Little of the county is developed for urban uses. Generally, the moderately well drained and excessively drained soils are well suited to building site development. The Albany, Kershaw, Ortega, Otela, and Ridgewood soils in units 1, 2, and 3 are examples. In most of the other units, the seasonal high water table, the hazard of ponding, and the slope are the main management concerns. The soils on flood plains and in depressions, such as those in units 7, 8, and 9, are unsuitable as sites for buildings because of flooding and ponding.

The seasonal high water table is a major limitation throughout the county, and alternative waste disposal systems (mounded septic tank absorption fields) are used.

The suitability of the soils for recreational development ranges from poorly suited to well suited, depending on the intensity of the expected use. Units 7, 8, and 9 are very poorly suited to many of these uses because of wetness, flooding, and ponding. All of the soils are suited to some recreational uses, such as paths and trails for hiking or horseback riding. Small areas that are suitable for intensive recreational uses generally are available in the units that otherwise have severe limitations.

The suitability for wildlife habitat generally is good throughout the county. All of the units have soils that are generally well suited to habitat for openland wildlife, woodland wildlife, or both. Areas in units 7, 8, and 9 and scattered areas in units 2, 3, 4, 5, and 6 are suited to wetland habitat.

# Detailed Soil Map Units

The map units delineated on the detailed maps at the back of this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps and interpretative tables, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the heading "Use and Management of the Soils."

A map unit delineation on a map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some "included" areas that belong to other taxonomic classes.

Most included soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of included areas in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, depth to rock, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Chaires fine sand, limestone substratum, is a phase of the Chaires series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Tooles-Tennille-Wekiva complex, depressional, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Dorovan and Pamlico soils, depressional, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits is an example.

Table 4 gives the acreage and proportionate extent of soils in each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

## 3—Clara and Osier fine sands

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 400 acres

### *Composition*

Clara and similar soils: 45 percent
Osier and similar soils: 30 percent
Dissimilar soils: 25 percent

### *Typical Profile*

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown fine sand

*Subsurface layer:*
6 to 19 inches—grayish brown fine sand

*Subsoil:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

**Osier**

*Surface layer:*
0 to 5 inches—very dark grayish brown fine sand

*Substratum:*
5 to 18 inches—brown fine sand
18 to 25 inches—pale brown fine sand
25 to 50 inches—light brownish gray fine sand
50 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Rapid throughout
*Slope class:* Nearly level
*Available water capacity:* Clara—moderate; Osier—low
*Shrink-swell potential:* Low
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Goldhead, Meadowbrook, Plummer, and Pottsburg soils on flats
- Boulogne and Sapelo soils in areas of flatwoods
- Albany, Lutterloh, Ocilla, and Ridgewood soils on rises and knolls

*Similar soils:*
- Clara-like soils that have limestone bedrock below a depth of 60 inches and Clara-like soils that do not have a gray to light gray subsurface layer; in positions similar to those of the Clara soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Clara—IVw; Osier—Vw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* North Florida Flatwoods

## 5—Chaires fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 300 acres

### *Composition*

Chaires and similar soils: 81 percent
Dissimilar soils: 19 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 20 inches—light brownish gray fine sand

*Subsoil:*
20 to 26 inches—black fine sand
26 to 30 inches—dark reddish brown fine sand

*Second subsurface layer:*
30 to 52 inches—dark yellowish brown fine sand

*Second subsoil:*
52 to 80 inches—light gray and light olive gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow or slow in the subsoil
*Available water capacity:* Moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 13 percent of the map unit and within a depth of 61 to 80 inches in about 5 percent. Where present, it is at a depth of about 30 to 78 inches. The best estimate for overall average depth to bedrock (where present) is 56 inches.

### *Minor Components*

*Dissimilar soils:*
• Chaires, Meadowbrook, Osier, and Tooles soils in depressions
• Chaires, Meadowbrook, Pottsburg, Tooles, Osier, and Wekiva soils on flats
• Steinhatchee soils in areas of flatwoods
• Melvina, Moriah, and Ridgewood soils on rises and knolls

*Similar soils:*
• Chaires-like soils that have limestone bedrock within a depth of 80 inches, have an organic-stained subsoil at a depth of more than 30 inches, have a loamy subsoil at a depth of less than 40 inches, or have limestone at a depth of more than 60 inches; in positions similar to those of the Chaires soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, percs slowly, poor filter, seepage, too sandy, cutbanks cave, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* North Florida Flatwoods

## 6—Leon fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods

*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 500 acres

### *Composition*

Chaires and similar soils: 78 percent
Dissimilar soils: 22 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 11 inches—grayish brown fine sand
11 to 25 inches—light gray fine sand

*Subsoil:*
25 to 30 inches—black fine sand
30 to 34 inches—dark reddish brown fine sand

*Substratum:*
34 to 56 inches—dark yellowish brown fine sand
56 to 80 inches—yellowish brown fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately rapid in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 1 percent of the map unit and within a depth of 61 to 80 inches in about 3 percent. Where present, it is at a depth of about 60 to 78 inches. The best estimate for overall average depth to bedrock (where present) is 70 inches.

### *Minor Components*

*Dissimilar soils:*
• Chaires, Meadowbrook, Osier, and Tooles soils and Osier-like soils that have a thick, dark surface layer; on flood plains and in depressions
• Chaires, Meadowbrook, Osier, Pottsburg, Tennille, Tooles, and Wekiva soils on flats
• Leon, Leon-like soils that have an organic-stained subsoil below a depth of 30 inches, and Steinhatchee soils; on flatwoods
• Moriah and Ridgewood soils on rises and knolls

*Similar soils:*
• Leon-like soils that have limestone bedrock within a depth of 80 inches, have an organic-stained subsoil below a depth of 30 inches, do or do not have limestone below a depth of 60 inches, or have a loamy subsoil at a depth of less than 40 inches; in positions similar to those of the Leon soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake

*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* North Florida Flatwoods

## 8—Meadowbrook fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 200 acres

### *Composition*

Meadowbrook and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow or moderate in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 1 percent of the map unit and within a depth of 61 to 80 inches in about 10 percent. Where present, it is at a depth of about 55 to 76 inches. The best estimate for overall average depth to bedrock is 70 inches.

### *Minor Components*

*Dissimilar soils:*
• Meadowbrook soils in depressions
• Chaires and Clara soils and Goldhead-like soils that have a loamy subsoil at a depth of less than 20 inches
• Meadowbrook-like soils that have a weak, organic-stained subsoil directly beneath the surface layer
• Tennille soils on flats
• Chaires soils and Chaires-like soils that have an organic-stained subsoil below a depth of 30 inches
• Chaires-like soils that have limestone below a depth of 60 inches
• Leon soils in areas of flatwoods

*Similar soils:*
• Meadowbrook-like soils that have limestone bedrock above and below a depth of 80 inches and Goldhead-like soils that have pale brown, brown, light yellowish brown, and yellowish brown subsurface layers; in positions similar to those of the Meadowbrook soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine

*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, percs slowly, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* North Florida Flatwoods

## 9—Sapelo fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 400 acres

### *Composition*

Sapelo and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 12 inches—gray fine sand
12 to 28 inches—light gray fine sand

*Subsoil:*
28 to 34 inches—black fine sand
34 to 45 inches—dark reddish brown fine sand

*Second subsurface layer:*
45 to 60 inches—light gray fine sand

*Second subsoil:*
60 to 73 inches—light brownish gray sandy clay loam

73 to 80 inches—light olive gray fine sandy loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow or moderate in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments

### *Minor Components*

*Dissimilar soils:*
• Leon, Sapelo, and Surrency soils in depressions
• Clara, Osier, Meadowbrook, and Pottsburg soils on flats
• Boulogne and Leon soils in areas of flatwoods
• Albany and Ocilla soils on rises and knolls

*Similar soils:*
• Sapelo-like soils that have limestone bedrock within a depth of 80 inches; Mascotte soils; Mascotte-like soils that do not have a subsurface layer and a weak, organic-stained subsoil directly beneath the surface layer; and some Mascotte soils that have a loamy subsoil below a depth of 40 inches; in positions similar to those of the Sapelo soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 7W for slash pine
*Ecological community:* North Florida Flatwoods

## 10—Mandarin-Hurricane complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 150 acres

### *Composition*

Mandarin and similar soils: 62 percent
Hurricane and similar soils: 18 percent
Dissimilar soils: 20 percent

### *Typical Profile*

**Mandarin**

*Surface layer:*
0 to 7 inches—dark gray fine sand

*Subsurface layer:*
7 to 15 inches—gray fine sand
15 to 26 inches—light gray fine sand

*Subsoil:*
26 to 30 inches—dark reddish brown fine sand
30 to 34 inches—reddish brown fine sand
34 to 44 inches—yellowish brown fine sand

*Substratum:*
44 to 80 inches—light gray fine sand

**Hurricane**

*Surface layer:*
0 to 8 inches—very dark grayish brown fine sand

*Subsurface layer:*
8 to 22 inches—light yellowish brown fine sand
22 to 32 inches—very pale brown fine sand
32 to 48 inches—yellow fine sand
48 to 63 inches—white fine sand

*Subsoil:*
63 to 69 inches—brown fine sand
69 to 80 inches—black fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Mandarin—moderate in the subsoil; Hurricane—moderately rapid in the subsoil
*Available water capacity:* Mandarin—moderate; Hurricane—low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Low
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Evergreen and Wesconnett soils in depressions
- Lynn Haven soils on flats
- Leon, Boulogne, Pottsburg, and Sapelo soils in areas of flatwoods
- Ortega soils on rises and knolls

*Similar soils:*
- Soils that are similar to the Mandarin and Hurricane soils but that have limestone bedrock within a depth of 80 inches; Mandarin-like soils that have a weak, organic-stained subsoil; Mandarin-like soils that have an organic-stained subsoil below a depth of 30 inches; Mandarin-like soils that have a dark surface layer; and Ridgewood soils; in positions similar to those of the Mandarin and Hurricane soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor

*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, and droughtiness
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Mandarin—VIs; Hurricane—IIIw
*Woodland ordination symbol:* Mandarin—8S for slash pine; Hurricane—11W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 12—Ortega fine sand, 0 to 5 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 1,000 acres

### *Composition*

Ortega and similar soils: 78 percent
Dissimilar soils: 22 percent

### *Typical Profile*

*Surface layer:*
0 to 5 inches—gray fine sand

*Substratum:*
5 to 42 inches—very pale brown fine sand
42 to 61 inches—light yellowish brown fine sand
61 to 80 inches—white fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Permeability:* Rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Lynn Haven soils in depressions and on flats
• Boulogne and Leon soils in areas of flatwoods
• Hurricane and Ridgewood soils on the lower rises and knolls
• Kershaw soils on the higher rises and knolls

*Similar soils:*
• Ortega-like soils that have an organic-stained subsoil below a depth of 60 inches; in positions similar to those of the Ortega soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish

seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Droughtiness and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Droughtiness and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, and droughtiness
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIs
*Woodland ordination symbol:* 10S for slash pine
*Ecological community:* Longleaf Pine-Turkey Oak Hills

## 13—Hurricane fine sand, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 200 acres

### *Composition*

Hurricane and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 8 inches—very dark grayish brown fine sand

*Subsurface layer:*
8 to 22 inches—light yellowish brown fine sand
22 to 32 inches—very pale brown fine sand
32 to 48 inches—yellow fine sand
48 to 63 inches—white fine sand

*Subsoil:*
63 to 69 inches—brown fine sand
69 to 80 inches—black fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderately rapid in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 5 percent of the map unit and within a depth of 61 to 80 inches in about 1 percent. Where present, it is at a depth of about 35 to 65 inches. The best estimate for overall average depth to bedrock is 50 inches.

### *Minor Components*

*Dissimilar soils:*
• Evergreen, Lynn Haven, and Osier soils in depressions
• Osier and Tooles soils on flats
• Boulogne, Chaires, Mandarin, and Leon soils in areas of flatwoods

• Lutterloh, Ridgewood, and Ortega soils on rises and knolls

*Similar soils:*
• Hurricane-like soils that have limestone bedrock within a depth of 80 inches or have an organic-stained subsoil within a depth of 50 inches and Pottsburg-like soils that have a seasonal high water table at a depth of 12 to 24 inches; in positions similar to those of the Hurricane soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Droughtiness and rapid leaching of plant nutrients
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 14—Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Chipley—rises and knolls; Lynn Haven—depressions; Boulogne—flatwoods
*Shape of areas:* Rounded or irregular
*Size of areas:* 5 to more than 200 acres

### *Composition*

Chipley and similar soils: 30 percent
Lynn Haven and similar soils: 25 percent
Boulogne and similar soils: 19 percent
Dissimilar soils: 26 percent

### *Typical Profile*

**Chipley**

*Surface layer:*
0 to 9 inches—brown sand

*Substratum:*
9 to 48 inches—yellowish brown sand
48 to 69 inches—light yellowish brown sand
69 to 80 inches—light gray sand

**Lynn Haven**

*Surface layer:*
0 to 13 inches—very dark brown mucky fine sand

*Subsurface layer:*
13 to 19 inches—light brownish gray fine sand

*Subsoil:*
19 to 27 inches—black fine sand
27 to 31 inches—dark brown fine sand
31 to 34 inches—dark yellowish brown fine sand

*Second subsurface layer:*
34 to 52 inches—yellowish brown fine sand

*Second subsoil:*
52 to 80 inches—dark reddish brown fine sand

**Boulogne**

*Surface layer:*
0 to 5 inches—black fine sand

*Subsoil:*
5 to 14 inches—dark brown fine sand

*Substratum:*
14 to 20 inches—dark grayish brown fine sand
20 to 31 inches—grayish brown fine sand
31 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Chipley—somewhat poorly drained; Lynn Haven—very poorly drained; Boulogne—poorly drained
*Permeability:* Chipley—rapid throughout; Lynn Haven—moderately rapid or moderate in the subsoil; Boulogne—moderately rapid in the subsoil
*Available water capacity:* Chipley and Boulogne—low; Lynn Haven—moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Chipley—low or very low; Lynn Haven—moderate; Boulogne—low
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Pamlico, Starke, and Surrency soils in depressions
- Clara and Osier soils on flats
- Goldhead-like soils that have a weak, organic-stained subsoil directly beneath the surface layer; in areas of flatwoods
- Albany, Kershaw, Ortega, and Otela soils on rises and knolls

*Similar soils:*
- Similar soils that have limestone bedrock within a depth of 80 inches; on rises, on knolls, in areas of flatwoods, and in depressions
- Chipley-like soils that have a thick, dark surface layer; on rises and knolls
- Lynn Haven-like soils that do not have subsurface layers; in depressions
- Pottsburg-like soils that have a thick, dark surface layer; in depressions
- Pottsburg soils in areas of flatwoods
- Hurricane soils and Pottsburg-like soils that have a seasonal high water table at a depth of 12 to 24 inches; on rises and knolls

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Chipley—moderate; Lynn Haven—not suited; and Boulogne—high
*Trees to plant:* Chipley—slash pine, loblolly pine, and longleaf pine; Boulogne—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Chipley—poor; Lynn Haven—unsuited; Boulogne—fair
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- The irrigation of high-value crops on the Chipley soil

is typically feasible where irrigation water is readily available.
• Crops produced on the Boulogne soil are not normally irrigated.
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.

**Pasture and hayland**

*Suitability:* Chipley—moderately well suited; Lynn Haven—unsuited; Boulogne—well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields in areas of the Chipley soil.
• A total management system for the water table in areas of the Boulogne soil should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth in areas of the Boulogne soil.
• The proper spacing of tile drains is important for obtaining adequate drainage in areas of the Boulogne soil.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall in areas of the Boulogne soil.
• Controlled grazing helps to maintain vigorous plants and maximum yields in areas of the Boulogne soil.

**Urban development**

*Suitability:* Chipley and Boulogne—poor; Lynn Haven—unsuited
*Management concerns:* Chipley and Boulogne—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity; Lynn Haven—ponding, poor filter, seepage, too sandy, and cutbanks cave
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Chipley IIIs; Lynn Haven—VIIw; Boulogne—IIIw
*Woodland ordination symbol:* Chipley—8W for slash pine; Lynn Haven—not assigned; Boulogne—11W for slash pine
*Ecological community:* Chipley—Upland Hardwood Hammocks; Lynn Haven—Shrub Bogs-Bay Swamps; Boulogne—North Florida Flatwoods

## 15—Ridgewood fine sand, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 200 acres

### *Composition*

Ridgewood and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 9 inches—grayish brown fine sand

*Substratum:*
9 to 48 inches—yellowish brown fine sand
48 to 69 inches—light yellowish brown fine sand
69 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Clara soil in depressions

• Clara, Lynn Haven, Osier, Plummer, and Pottsburg soils and Pottsburg-like soils that have a subsoil; on flats
• Boulogne, Chaires, Leon, Mandarin, and Melvina soils in areas of flatwoods
• Albany, Lutterloh, Ortega, and Resota soils on rises and knolls

*Similar soils:*
• Hurricane soils in positions similar to those of the Ridgewood soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVs
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 16—Lutterloh-Ridgewood complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 200 acres

### *Composition*

Lutterloh and similar soils: 58 percent
Ridgewood and similar soils: 21 percent
Dissimilar soils: 21 percent

### *Typical Profile*

**Lutterloh**

*Surface layer:*
0 to 8 inches—dark gray fine sand

*Subsurface layer:*
8 to 21 inches—yellowish brown fine sand
21 to 51 inches—very pale brown fine sand

*Subsoil:*
51 to 61 inches—gray sandy clay loam

61 to 80 inches—light gray sandy clay loam

**Ridgewood**

*Surface layer:*
0 to 9 inches—grayish brown fine sand

*Substratum:*
9 to 48 inches—yellowish brown fine sand
48 to 69 inches—light yellowish brown fine sand
69 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Lutterloh—moderate to very slow in the subsoil; Ridgewood—rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Lutterloh—moderate; Ridgewood—low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 10 percent of the map unit and within a depth of 61 to 80 inches in about 5 percent. Where present, it is at a depth of about 10 to 70 inches. The best estimate for overall average depth to bedrock is 37 inches.

### *Minor Components*

*Dissimilar soils:*
- Meadowbrook soil in depressions
- Meadowbrook, Clara, and Tennille soils on flats
- Chaires soils that have limestone below a depth of 60 inches; in areas of flatwoods
- Moriah soils and Pottsburg-like soils that have a seasonal high water table at a depth of 12 to 24 inches; on rises and knolls

*Similar soils:*
- Ridgewood-like soils that have limestone bedrock within a depth of 80 inches and Lutterloh soils that have limestone below a depth of 60 inches; in positions similar to those of the Lutterloh and Ridgewood soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
- The local Health Department can be contacted for guidance regarding sanitary facilities.

• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Lutterloh—IIIw; Ridgewood—IVs
*Woodland ordination symbol:* 10W
*Ecological community:* Upland Hardwood Hammocks

## 17—Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Ousley—rises and knolls; Leon—flatwoods; Clara—flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to 200 acres

### *Composition*

Ousley and similar soils: 29 percent
Leon and similar soils: 28 percent
Clara and similar soils: 27 percent
Dissimilar soils: 16 percent

### *Typical Profile*

**Ousley**

*Surface layer:*
0 to 4 inches—very dark gray fine sand

*Substratum:*
4 to 45 inches—very pale brown fine sand
45 to 80 inches—light gray fine sand

**Leon**

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 11 inches—grayish brown fine sand
11 to 25 inches—light gray fine sand

*Subsoil:*
25 to 30 inches—black fine sand
30 to 34 inches—dark reddish brown fine sand

*Substratum:*
34 to 56 inches—dark yellowish brown fine sand
56 to 80 inches—yellowish brown fine sand

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown fine sand

*Subsurface layer:*
6 to 19 inches—grayish brown fine sand

*Subsoil:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Ousley—somewhat poorly drained; Leon and Clara—poorly drained
*Permeability:* Ousley—rapid throughout; Leon—moderate or moderately rapid in the subsoil; Clara—rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Flooding:* Ousley—occassional for very brief periods; Leon and Clara—occassional for brief periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Low
*Parent material:* Sandy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 6 percent of the map unit and within a depth of 61 to 80 inches in about 6 percent. Where present, it is at a depth of about 25 to 72 inches. The best estimate for overall average depth to bedrock is 51 inches.

### *Minor Components*

*Dissimilar soils:*
• Chaires soils in areas of flatwoods
• Lutterloh, Lutterloh-like soils that have a loamy subsoil at a depth of 20 to 40 inches, Moriah soils, and Seaboard soils; in positions similar to those of the Ousley, Leon, and Clara soils

*Similar soils:*
• Osier soils on flats
• Boulogne soils and Leon-like soils that have limestone at a depth of more than 60 inches; in areas of flatwoods
• Ridgewood soils on rises and knolls

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Ousley—moderate; Leon and Clara—high
*Trees to plant:* Ousley—slash pine, loblolly pine, and longleaf pine; Leon and Clara—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Ousley—moderately well suited; Leon and Clara—well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to wetness, flooding, poor filter, seepage, cutbanks cave, droughtiness, and corrosivity

### *Interpretive Groups*

*Land capability classification:* Ousley—IIIw; Leon—IVw; Clara—VIw
*Woodland ordination symbol:* Ousley—8W for slash pine; Leon—10W for slash pine; Clara—11W for slash pine
*Ecological community:* Ousley—Upland Hardwood Hammocks; and Leon and Clara—North Florida Flatwoods

## 19—Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 500 acres

### *Composition*

Otela and similar soils: 49 percent
Ortega and similar soils: 24 percent
Lutterloh and similar soils: 23 percent
Dissimilar soils: 4 percent

### *Typical Profile*

**Otela**

*Surface layer:*
0 to 7 inches—dark brown fine sand

*Subsurface layer:*
7 to 28 inches—brownish yellow fine sand
28 to 47 inches—very pale brown fine sand
47 to 54 inches—yellowish brown loamy fine sand

*Subsoil:*
54 to 63 inches—yellowish brown fine sandy loam
63 to 80 inches—gray sandy clay loam

**Ortega**

*Surface layer:*
0 to 5 inches—gray fine sand

*Substratum:*
5 to 42 inches—very pale brown fine sand
42 to 61 inches—light yellowish brown fine sand
61 to 80 inches—white fine sand

**Lutterloh**

*Surface layer:*
0 to 8 inches—dark grayish brown fine sand

*Subsurface layer:*
8 to 19 inches—yellowish brown fine sand
19 to 36 inches—very pale brown fine sand
36 to 51 inches—light gray fine sand

*Subsoil:*
51 to 64 inches—light brownish gray loamy fine sand

*Bedrock:*
64 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Otela and Ortega—moderately well drained; Lutterloh—somewhat poorly drained
*Permeability:* Otela—moderately slow or slow in the subsoil; Oretga—rapid throughout; Lutterloh—moderate to very slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Otela—moderate; Ortega and Lutterloh—low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Starke soils in depressions
- Plummer and Osier soils on flats
- Ocilla and Ridgewood soils in positions similar to those of the Otela, Ortega, and Lutterloh soils

*Similar soils:*
- Soils that are similar to the Otela and Ortega soils but that have limestone bedrock within a depth of 80 inches and Hurricane soils; in positions similar to those of the Otela, Ortega, and Lutterloh soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Droughtiness and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Droughtiness and fast intake
*Management considerations:*
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Otela—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and percs slowly; Ortega and Lutterloh—wetness, poor filter, seepage, too sandy, cutbanks cave, and droughtiness
*Management considerations:*
- The local Health Department can be contacted for guidance regarding sanitary facilities.
- Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
- Lawns need irrigation during periods of low rainfall.
- Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Otela and Ortega—IIIs; Lutterloh—IIIw
*Woodland ordination symbol:* Otela and Ortega—10S for slash pine; Lutterloh—10W for slash pine
*Ecological community:* Otela and Ortega—Upland Hardwood Hammocks; Luttterloh—North Florida Flatwoods

## 20—Melvina-Mandarin complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 600 acres

### *Composition*

Melvina and similar soils: 40 percent
Mandarin and similar soils: 38 percent
Dissimilar soils: 22 percent

### *Typical Profile*

**Melvina**

*Surface layer:*
0 to 6 inches—gray fine sand

*Upper subsurface layer:*
6 to 28 inches—white fine sand

*Upper part of the subsoil:*
28 to 32 inches—dark brown fine sand
32 to 39 inches—dark reddish brown and brown fine sand
39 to 51 inches—pale brown fine sand

*Lower subsurface layer:*
51 to 53 inches—light gray fine sand

*Lower part of the subsoil:*
53 to 80 inches—light gray sandy clay loam

**Mandarin**

*Surface layer:*
0 to 7 inches—dark gray fine sand

*Subsurface layer:*
7 to 15 inches—gray fine sand
15 to 26 inches—light gray fine sand

*Subsoil:*
26 to 30 inches—dark reddish brown fine sand
30 to 34 inches—reddish brown fine sand
34 to 44 inches—yellowish brown fine sand

*Substratum:*
44 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Melvina—moderately slow to very slow in the subsoil; Mandarin—moderate in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Low
*Parent material:* Sandy and loamy marine sediments
*Bedrock:* Bedrock is within a depth of 60 inches in about 13 percent of the map unit and within a depth of 61 to 80 inches in about 14 percent. Where present, it is at a depth of about 25 to 79 inches. The best estimate for overall average depth to bedrock is 59 inches.

### *Minor Components*

*Dissimilar soils:*
- Meadowbrook soils on flats
- Chaires, Leon, and Steinhatchee soils in areas of flatwoods
- Mandarin-like soils that have limestone bedrock within a depth of 80 inches, Lutterloh soils, Lutterloh-like soils that have a loamy subsoil at a depth of 20 to 40 inches, Moriah soils, Ortega soils, Otela soils, Kershaw-like soils that have lamellae below a depth of 50 inches, Resota soils, and Ridgewood soils; on rises and knolls

*Similar soils:*
- Hurricane soils, Melvina-like soils that have an organic-stained subsoil below a depth of 30 inches, Mandarin-like soils that have an organic-stained subsoil at a depth of 30 to 50 inches; in positions similar to those of the Melvina and Mandarin soils
- Pottsburg soils in areas of flatwoods

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Suitability:* Poor
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition

*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Melvina—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, corrosivity, percs slowly, and depth to rock; Mandarin—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Melvina—IVs; Mandarin—VIs
*Woodland ordination symbol:* Melvina—10W for slash pine; Mandarin—8S for slash pine
*Ecological community:* North Florida Flatwoods

## 21—Kershaw fine sand, 0 to 8 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Landform position:* Linear to concave
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 200 acres

### *Composition*

Kershaw and similar soils: 81 percent
Dissimilar soils: 19 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—dark grayish brown fine sand

*Substratum:*
6 to 42 inches—yellowish brown fine sand
42 to 64 inches—brownish yellow fine sand
64 to 80 inches—very pale brown fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Excessively drained

*Permeability:* Very rapid throughout
*Available water capacity:* Very low
*Shrink-swell potential:* Low
*Slope class:* Nearly level to moderately sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Ortega and Ridgewood soils on the lower rises and knolls
• Boulogne soils in areas of flatwoods

*Similar soils:* None

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Urban development

**Woodland**

*Potential productivity:* Low
*Trees to plant:* Sand pine and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Not suited due to very low natural fertility, droughtiness, and rapid leaching of plant nutrients

**Pasture and hayland**

*Suitability:* Fair
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Droughtiness, fast intake, and slope
*Management considerations:*
• Intensive nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Good
*Management concerns:* Poor filter, seepage, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* VIIs
*Woodland ordination symbol:* 8S for sand pine
*Ecological community:* Longleaf Pine-Turkey Oak Hills

## 22—Ocilla sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 200 acres

### *Composition*

Ocilla and similar soils: 81 percent
Dissimilar soils: 19 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—dark grayish brown sand

*Subsurface layer:*
6 to 23 inches—brown sand

*Subsoil:*
23 to 28 inches—brownish yellow fine sandy loam
28 to 47 inches—light gray sandy clay loam
47 to 68 inches—light gray fine sandy loam

*Substratum:*
68 to 80 inches—light gray sandy loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Moderate
*Shrink-swell potential:* Low

*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Mascotte soils in areas of flatwoods
- Albany and Ridgewood soils on rises and knolls

*Similar soils:* None

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, seepage, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
- The local Health Department can be contacted for guidance regarding sanitary facilities.
- Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
- Lawns need irrigation during periods of low rainfall.
- Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 8W for slash pine
*Ecological community:* Upland Hardwoods Hammocks

## 23—Melvina-Moriah-Lutterloh complex

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 2,000 acres

### *Composition*

Melvina and similar soils: 44 percent
Moriah and similar soils: 18 percent
Lutterloh and similar soils: 16 percent
Dissimilar soils: 22 percent

### *Typical Profile*

**Melvina**

*Surface layer:*
0 to 6 inches—gray fine sand

*Upper subsurface layer:*
6 to 28 inches—white fine sand

*Upper subsoil:*
28 to 32 inches—dark brown fine sand
32 to 39 inches—dark reddish brown and brown fine sand
39 to 51 inches—pale brown fine sand

*Lower subsurface layer:*
51 to 53 inches—light gray fine sand

*Lower subsoil:*
53 to 80 inches—light gray sandy clay loam

**Moriah**

*Surface layer:*
0 to 5 inches—dark gray fine sand

*Subsurface layer:*
5 to 9 inches—light brownish gray fine sand
9 to 31 inches—white fine sand
31 to 34 inches—pinkish gray fine sand

*Subsoil:*
34 to 57 inches—light gray sandy clay loam

*Bedrock:*
57 inches—soft, weathered, fractured limestone

**Lutterloh**

*Surface layer:*
0 to 8 inches—dark grayish brown fine sand

*Subsurface layer:*
8 to 19 inches—yellowish brown fine sand
19 to 36 inches—very pale brown fine sand
36 to 51 inches—light gray fine sand

*Subsoil:*
51 to 64 inches—light brownish gray loamy fine sand

*Bedrock:*
64 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Melvina and Lutterloh—very deep; Moriah—deep and very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Melvina—moderate to very slow in the subsoil; Moriah—moderate in the subsoil; Lutterloh—moderate to slow in the subsoil
*Available water capacity:* Very low
*Shrink-swell potential:* Melvina and Moriah—low; Lotterloh—moderate
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Melvina—moderately low; Moriah—low or moderately low; Lutterloh—low to moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 30 percent of the map unit and within a depth of 61 to 80 inches in about 14 percent. Where present, it is at a depth of about 22 to 77 inches. The best estimate for overall average depth to bedrock is 50 inches.

### *Minor Components*

*Dissimilar soils:*
- Meadowbrook soils in depressions and on flats
- Melvina soils that have limestone bedrock within a depth of 80 inches, Chaires-like soils that have an organic-stained subsoil below a depth of 30 inches, Steinhatchee soils, and Steinhatchee-like soils that have limestone within a depth of 20 inches; in areas of flatwoods
- Bushnell, Chiefland, Hurricane, Matmon, Ridgewood, and Seaboard soils; Moriah-like soils that are better drained than the Melvina, Moriah, and Lutterloh soils; and Wekiva soils; on rises and knolls

*Similar soils:*
- Mandarin soils; Melvina-like soils that have an organic-stained subsoil below a depth of 30 inches; Melvina-like soils that have a weak, organic-stained subsoil; and Moriah-like soils that have a shallow, loamy subsoil; in positions similar to those of the Melvina, Moriah, and Lutterloh soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Melvina—poor; Moriah and Lutterloh—moderately well suited
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Melvina—poor; Moriah—moderately suited; Lutterloh—well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Control grazing to prevent overgrazing.

**Urban development**

*Suitability:* Moderately suited
*Management concerns:* Melvina—wetness, percs slowly, poor filter, seepage, depth to rock, too sandy, cutbanks cave, droughtiness, and corrosivity; Moriah—wetness, poor filter, seepage, depth to rock, too sandy, cutbanks cave, droughtiness, and corrosivity; Lutterloh—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Melvina—IVs; Moriah and Lutterloh—IIIw
*Woodland ordination symbol:* Melvina and Lutterloh—10W for slash pine; Moriah—11S for slash pine
*Ecological community:* North Florida Flatwoods

## 24—Albany sand, 0 to 5 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 80 acres

### *Composition*

Albany and similar soils: 76 percent
Dissimilar soils: 24 percent

### *Typical Profile*

*Surface layer:*
0 to 10 inches—dark grayish brown sand

*Subsurface layer:*
10 to 26 inches—grayish brown sand
26 to 37 inches—very pale brown sand
37 to 50 inches—light gray sand

*Subsoil:*
50 to 57 inches—pale brown fine sandy loam
57 to 80 inches—light gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments

*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Plummer and Lynn Haven soils on flats
- Chaires and Sapelo soils in areas of flatwoods
- Melvina and Ocilla soils on rises and knolls

*Similar soils:*
- Hurricane soils in positions similar to those of the Albany soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
- The local Health Department can be contacted for guidance regarding sanitary facilities.
- Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
- Lawns need irrigation during periods of low rainfall.
- Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 25—Pottsburg fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 100 acres

### *Composition*

Pottsburg and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—dark gray fine sand

*Subsurface layer:*
6 to 15 inches—pale brown fine sand
15 to 52 inches—white fine sand

*Subsoil:*
52 to 80 inches—dark reddish brown fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Lynn Haven soils, Leon soils, Meadowbrook soils, Meadowbrook-like soils that have limestone below a depth of 60 inches, and Osier soils; on flats
• Chaires and Boulogne soils in areas of flatwoods
• Chiefland, Hurricane, Moriah, Mandarin, and Ousley soils and Pottsburg-like soils that have limestone bedrock within a depth of 80 inches; in positions similar to those of the Pottsburg soil

*Similar soils:*
• Boulogne and Leon soils in positions similar to those of the Pottsburg soil

### *Use and Management*

**Dominant uses:** Timber production
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderately high
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* North Florida Flatwoods

## 26—Resota-Hurricane complex, 0 to 5 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 40 to more than 60 acres

### *Composition*

Resota and similar soils: 67 percent
Hurricane and similar soils: 20 percent
Dissimilar soils: 13 percent

### *Typical Profile*

**Resota**

*Surface layer:*
0 to 3 inches—gray sand

*Subsurface layer:*
3 to 13 inches—white sand

*Subsoil:*
13 to 19 inches—strong brown sand
19 to 37 inches—brownish yellow sand
37 to 55 inches—very pale brown sand

*Substratum:*
55 to 80 inches—light gray fine sand

**Hurricane**

*Surface layer:*
0 to 8 inches—very dark grayish brown fine sand

*Subsurface layer:*
8 to 22 inches—light yellowish brown fine sand
22 to 32 inches—very pale brown fine sand
32 to 48 inches—yellow fine sand
48 to 63 inches—white fine sand

*Subsoil:*
63 to 69 inches—brown fine sand
69 to 80 inches—black fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Resota—moderately well drained; Hurricane—somewhat poorly drained
*Permeability:* Resota—very rapid throughout; Hurricane—moderately rapid in the subsoil
*Available water capacity:* Resota—very low; Hurricane—low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Resota—very low; Hurricane—low or moderately low
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Leon soils in areas of flatwoods
- Ortega-like soils that have an organic-stained subsoil below a depth of 50 inches and Ridgewood soils; in positions similar to those of the Resota and Hurricane soils

*Similar soils:*
- Mandarin soils in positions similar to those of the Resota and Hurricane soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Resota—low; Hurricane—high
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Resota—not suited; Hurricane—moderate
*Commonly grown crops:* Corn, grain sorghum, and tobacco

*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Resota—not suited; Hurricane—moderate
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Resota—moderately well suited; Hurricane—moderate
*Management concerns:* Resota—wetness, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity; Hurricane—wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Resota—VIs; Hurricane—IIIw
*Woodland ordination symbol:* Resota—8S for slash pine; Hurricane—11W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 27—Plummer fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods and flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 120 acres

### *Composition*

Plummer and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 7 inches—black fine sand

*Subsurface layer:*
7 to 14 inches—grayish brown fine sand
14 to 22 inches—gray fine sand
22 to 55 inches—light gray fine sand

*Subsoil:*
55 to 80 inches—gray fine sandy loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Depth to bedrock:* No bedrock within a depth of 80 inches
*Parent material:* Sandy marine sediments

### *Minor Components*

*Dissimilar soils:*
• Mascotte, Plummer, Goldhead, Starke, and Surrency soils in depressions
• Goldhead-like soils that have a loamy subsoil within a depth of 20 inches; on flats

*Similar soils:*
• Plummer-like soils that have a weak, organic-stained subsoil directly beneath the surface layer; in positions similar to those of the Plummer soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* North Florida Flatwoods

## 28—Surrency, Starke, and Croatan soils, depressional

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 200 acres

### *Composition*

Surrency and similar soils: 39 percent
Starke and similar soils: 27 percent
Croatan and similar soils: 21 percent
Dissimilar soils: 13 percent

### *Typical Profile*

**Surrency**

*Surface layer:*
0 to 16 inches—black mucky fine sand

*Subsurface layer:*
16 to 38 inches—light gray fine sand

*Subsoil:*
38 to 80 inches—gray sandy clay loam

**Starke**

*Surface layer:*
0 to 6 inches—black mucky fine sand
6 to 21 inches—black fine sand

*Subsurface layer:*
21 to 32 inches—dark grayish brown fine sand
32 to 51 inches—light gray fine sand

*Subsoil:*
51 to 56 inches—light gray fine sandy loam
56 to 80 inches—light gray sandy clay loam

**Croatan**

*Surface layer:*
0 to 25 inches—dark reddish brown muck

*Subsurface layer:*
25 to 31 inches—black mucky fine sand
31 to 39 inches—brown fine sand

*Substratum:*
39 to 80 inches—grayish brown sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Surrency and Starke—moderate or moderately slow in subsoil; Croatan—moderately rapid to slow in the organic matter and moderately rapid to moderately slow in the substratum
*Available water capacity:* Surrency and Starke—moderate; Croatan—high
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Surrency—moderate to very high; Starke and Croatan—very high
*Parent material:* Highly decomposed organic matter and sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Mascotte soils, Mascotte-like soils that have a surface layer of muck that ranges from 8 to 16 inches in thickness, Sapelo soils, and Sapelo-like soils that have a surface layer of muck that ranges from 8 to 16 inches in thickness; in depressions
• Clara, Lynn Haven, Pottsburg, and Sapelo soils all having a seasonal high water table at the surface to a depth of 6 inches; on flats

*Similar soils:*
• Evergreen soils, Pamlico soils, Plummer soils, Starke soils, Starke-like soils that have an organic-stained subsoil, and Surrency-like soils that have a loamy subsoil within a depth of 20 inches and that may have 8 to 16 inches of muck; in positions similar to those of the Surrency, Starke, and Croatan soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 29—Albany-Surrency, depressional, complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Albany—rises and knolls; Surrency—depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 80 acres

### *Composition*

Albany and similar soils: 45 percent
Surrency and similar soils: 38 percent
Dissimilar soils: 17 percent

### *Typical Profile*

**Albany**

*Surface layer:*
0 to 10 inches—dark grayish brown sand

*Subsurface layer:*
10 to 26 inches—grayish brown sand
26 to 37 inches—very pale brown sand
37 to 50 inches—light gray sand

*Subsoil:*
50 to 57 inches—pale brown fine sandy loam
57 to 80 inches—light gray sandy clay loam

**Surrency**

*Surface layer:*
0 to 16 inches—black mucky fine sand

*Subsurface layer:*
16 to 38 inches—light gray fine sand

*Subsoil:*
38 to 80 inches—gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Albany—somewhat poorly drained; Surrency—very poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Albany—low; Surrency—moderately low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Albany—moderately low; Surrency—moderate or moderately low
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Plummer soils on flats
- Plummer-like soils that have a weak, organic-stained subsoil directly beneath the surface layer and Sapelo soils; in areas of flatwoods

*Similar soils:* None

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Albany—moderately high; Surrency—not suited
*Trees to plant (Albany soil only):* Slash pine, loblolly pine, longleaf pine
*Management concerns:* Albany—equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of the Albany soil respond well to applications of fertilizer.

**Cropland**

*Suitability:* Albany—moderate; Surrency—not suited
*Commonly grown crops (Albany soil only):* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, fast intake, and ponding
*Management considerations (Albany soil only):*
- Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Albany—well suited; Surrency—not suited
*Commonly grown grasses (Albany soil only):* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, fast intake, and ponding
*Management considerations (Albany soil only):*
- A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
- A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.

• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Albany—moderately well suited; Surrency—not suited
*Management concerns (Albany soil only):* Wetness, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations (Albany soil only):*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Albany—IIIw; Surrency—VIIw
*Woodland ordination symbol:* Albany—10W for slash pine; Surrency—not assigned
*Ecological community:* Albany—Upland Hard Hammocks; Surrency—Shrub Bogs-Bay Swamps

## 30—Dorovan and Pamlico soils, depressional

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains and depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 10 to more than 1,500 acres

### *Composition*

Dorovan and similar soils: 56 percent
Pamlico and similar soils: 32 percent
Dissimilar soils: 12 percent

### *Typical Profile*

**Dorovan**

*Surface layer:*
0 to 4 inches—very dark brown muck

*Subsurface layer:*
4 to 72 inches—black muck

*Substratum:*
72 to 80 inches—black mucky fine sand

**Pamlico**

*Surface layer:*
0 to 3 inches—dark brown muck

*Subsurface layer:*
3 to 9 inches—black muck
9 to 22 inches—black and dark reddish brown muck

*Substratum:*
22 to 25 inches—black mucky fine sand
25 to 65 inches—brown fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Dorovan—moderate in the organic matter; Pamlico—moderate or moderately rapid in the organic matter
*Available water capacity:* Dorovan—very high; Pamlico—high
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Very high
*Parent material:* Highly decomposed organic matter
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Clara soils, Evergreen soils, Pamlico-like soils underlain by limestone, and Sapelo soils; in depressions
• Leon and Sapelo soils on flats
• Leon soils in areas of flatwoods
• Wekiva soils on rises and knolls

*Similar soils:*
• Croatan soils in positions similar to those of the Dorovan and Pamlico soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 33—Wesconnett, Evergreen, and Pamlico soils, depressional

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 300 acres

### *Composition*

Wesconnett and similar soils: 41 percent
Evergreen and similar soils: 25 percent
Pamlico and similar soils: 20 percent
Dissimilar soils: 14 percent

### *Typical Profile*

**Wesconnett**

*Surface layer:*
0 to 10 inches—black fine sand

*Subsoil:*
10 to 21 inches—very dark gray fine sand
21 to 40 inches—dark reddish brown fine sand
40 to 62 inches—brown fine sand

*Substratum:*
62 to 80 inches—light gray fine sand

**Evergreen**

*Surface layer:*
0 to 9 inches—dark brown muck

*Subsurface layer:*
9 to 11 inches—black mucky fine sand
11 to 21 inches—dark gray fine sand

*Subsoil:*
21 to 25 inches—dark brown fine sand
25 to 50 inches—dark reddish brown fine sand
50 to 70 inches—strong brown fine sand
70 to 80 inches—brownish yellow fine sand

**Pamlico**

*Surface layer:*
0 to 3 inches—dark brown muck

*Subsurface layer:*
3 to 9 inches—black muck
9 to 22 inches—black and dark reddish brown muck

*Substratum:*
22 to 25 inches—black mucky fine sand
25 to 65 inches—brown fine sand

### *Soil Qualities and Properties*

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Wesconnett—moderate or moderately rapid in the subsoil; Evergreen—moderate in the subsoil; Pamlico—moderate or moderately rapid in the organic matter
*Available water capacity:* Wesconnett—moderate; Evergreen and Pamlico—high
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Wesconnett—moderate or high; Evergreen and Pamlico—very high
*Parent material:* Highly decomposed organic matter and sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Starke and Surrency soils in depressions
- Chaires soils, Clara soils, and Goldhead-like soils that have a weak, organic-stained subsoil directly beneath the surface layer; on flats
- Pottsburg soils in areas of flatwoods

*Similar soils:*
- Leon soils in depressions

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 34—Clara and Bodiford soils, frequently flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Shape of areas:* Long and narrow or irregular
*Size of areas:* 25 to more than 800 acres

### *Composition*

Clara and similar soils: 58 percent
Bodiford and similar soils: 21 percent
Dissimilar soils: 21 percent

### *Typical Profile*

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown mucky fine sand

*Subsurface layer:*
6 to 19 inches—grayish brown fine sand

*Subsoil:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

**Bodiford**

*Surface layer:*
0 to 12 inches—dark reddish brown muck

*Subsurface layer:*
12 to 18 inches—black mucky fine sand
18 to 29 inches—brown fine sand

*Subsoil:*
29 to 51 inches—light brownish gray sandy clay loam

*Bedrock:*
51 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Clara—very deep; Bodiford—deep
*Drainage class:* Very poorly drained
*Permeability:* Clara—rapid throughout; Bodiford—moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Frequent for long periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Clara—moderately low to high; Bodiford—very high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 16 percent of the map unit and within a depth of 61 to 80 inches in about 1 percent. Where present, it is at a depth of about 11 to 72 inches. The best estimate for overall average depth to bedrock is 43 inches.

### *Minor Components*

*Dissimilar soils:*
• Clara-like soils that have a surface layer of well decomposed organic matter that ranges from 8 to 16 inches in thickness; Croatan soils; Bodiford-like soils that have a mucky, clayey surface layer; Meadowbrook-like soils that have a thick, dark surface layer; Nutall-like soils that do not have a surface layer of well decomposed organic matter that ranges from 8 to 16 inches in thickness or that do not have a thick, dark surface layer; Pamlico soils; Tennille soils; and Tooles soils; in positions similar to those of the Clara and Bodiford soils
• Meadowbrook soils on flats
• Boulogne and Steinhatchee soils in areas of flatwoods

*Similar soils:*
• Osier soils; Osier-like soils that have a thick, dark surface layer; and Bodiford-like soils that have a surface layer of well decomposed organic matter that ranges from 8 to 16 inches in thickness; in positions similar to those of the Clara and Bodiford soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to flooding

### *Interpretive Groups*

*Land capability classification:* Clara—VIw; Bodiford—VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Swamp Hardwoods

## 35—Tooles, Meadowbrook, and Wekiva soils, frequently flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains

*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 150 acres

### *Composition*

Tooles and similar soils: 40 percent
Meadowbrook and similar soils: 28 percent
Wekiva and similar soils: 23 percent
Dissimilar soils: 9 percent

### *Typical Profile*

**Tooles**

*Surface layer:*
0 to 8 inches—grayish brown fine sand

*Subsurface layer:*
8 to 23 inches—brownish yellow fine sand
23 to 52 inches—very pale brown fine sand

*Subsoil:*
52 to 59 inches—light brownish gray sandy clay loam

*Bedrock:*
59 inches—soft, weathered, fractured limestone

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—yellowish brown fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Meadowbrook—very deep; Wekiva—shallow and moderately deep
*Drainage class:* Poorly drained
*Permeability:* Tooles—slow in the subsoil; Meadowbrook—moderate or moderately slow in the subsoil; Wekiva—moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Tooles—moderate; Meadowbrook and Wekiva—low
*Slope class:* Nearly level
*Flooding:* Frequent for long periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles and Meadowbrook—moderately low or moderate; Wekiva—moderate or high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 56 percent of the map unit and within a depth of 61 to 80 inches in about 6 percent. Where present, it is at a depth of about 15 to 65 inches. The best estimate for overall average depth to bedrock is 42 inches.

### *Minor Components*

*Dissimilar soils:*
• Similar soils that have limestone bedrock within a depth of 80 inches
• Clara soils, Clara-like soils that have a surface layer of highly decomposed organic matter that ranges from 8 to 16 inches in thickness, Clara-like soils that do not have a gray to light gray subsurface layer, Meadowbrook-like soils that have a surface layer of highly decomposed organic matter that ranges from 8 to 16 inches in thickness, Nutall soils, and Tennille soils; in positions similar to those of the Tooles, Meadowbrook, and Wekiva soils

*Similar soils:*
• Goldhead soils, Meadowbrook-like soils that have limestone below a depth of 60 inches, Tooles-like soils that have a loamy subsoil within a depth of 20 inches, and Wekiva soils that have limestone at a depth of 30 to 40 inches; in positions similar to those of the Tooles, Meadowbrook, and Wekiva soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to seasonal surface wetness and flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to flooding

### *Interpretive Groups*

*Land capability classification:* Tooles and Meadowbrook—VIw; Wekiva—Vw

*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 37—Tooles and Meadowbrook soils, depressional

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 150 acres

### *Composition*

Tooles and similar soils: 48 percent
Meadowbrook and similar soils: 36 percent
Dissimilar soils: 16 percent

### *Typical Profile*

**Tooles**

*Surface layer:*
0 to 7 inches—grayish brown fine sand

*Subsurface layer:*
7 to 24 inches—brownish yellow fine sand
24 to 52 inches—very pale brown fine sand

*Subsoil:*
52 to 59 inches—light brownish gray sandy clay loam

*Bedrock:*
59 inches—soft, weathered, fractured limestone

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Meadowbrook—very deep
*Drainage class:* Very poorly drained
*Permeability:* Tooles—slow in the subsoil; Meadowbrook—moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Tooles—moderate; Meadowbrook—low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles—moderately low to high; Meadowbrook—moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 63 percent of the map unit and within a depth of 61 to 80 inches in about 12 percent. Where present, it is at a depth of about 15 to 75 inches. The best estimate for overall average depth to bedrock is 44 inches.

### *Minor Components*

*Dissimilar soils:*
• Similar soils that have limestone bedrock within a depth of 80 inches; Clara-like soils that do not have a gray and light gray subsurface layer; Clara-like soils that have a surface layer of highly decomposed organic matter that ranges from 8 to 16 inches in thickness; Nutall soils; Pamlico soils; Surrency soils; Tennille soils; Wekiva soils; Wekiva-like soils that have a thick, dark colored surface layer; and Wekiva-like soils that have a mucky clayey surface layer; in positions similar to those of the Tooles and Meadowbrook soils

*Similar soils:*
• Goldhead-like soils that have yellow and brown subsurface layers, Meadowbrook soils that have limestone below a depth of 60 inches, Tooles-like soils that have a loamy subsoil below a depth of 40 inches, and Tooles-like soils that have a thick, dark surface layer; in positions similar to those of the Tooles and Meadowbrook soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 38—Clara and Meadowbrook soils, depressional

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 200 acres

### *Composition*

Clara and similar soils: 44 percent
Meadowbrook and similar soils: 32 percent
Dissimilar soils: 24 percent

### *Typical Profile*

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown mucky fine sand

*Subsoil:*
6 to 19 inches—grayish brown fine sand

*Subsurface layer:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Clara—rapid throughout; Meadowbrook—moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Clara—moderately low to high; Meadowbrook—moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 7 percent of the map unit and within a depth of 61 to 80 inches in about 1 percent. Where present, it is at a depth of about 21 to 70 inches. The best estimate for overall average depth to bedrock is 45 inches.

### *Minor Components*

*Dissimilar soils:*
- Clara-like soils that have a surface layer of highly decomposed organic matter that ranges from 8 to 16 inches in thickness; Clara-like soils that have a thick, dark surface layer and some that have a brightly colored subsurface; Croatan soils; Dorovan soils; Pottsburg-like soils that are very poorly drained and have a thick, dark surface layer; and Starke soils; in positions similar to those of the Clara and Meadowbrook soils
- Similar soils that have limestone bedrock within a depth of 80 inches, Chaires soils, Tennille soils, and Tooles soils; on flats
- Chaires and Leon soils in areas of flatwoods

*Similar soils:*
- Goldhead and Osier soils in positions similar to those of the Clara and Meadowbrook soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat (fig. 4)

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Swamp Hardwoods

## 40—Lutterloh fine sand, limestone substratum

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 50 acres

**Figure 4.—An area of Clara and Meadowbrook soils, depressional. Cypress trees are common in the center of such depressions.**

### *Composition*

Lutterloh and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 8 inches—dark grayish brown fine sand

*Subsurface layer:*
8 to 19 inches—yellowish brown fine sand
19 to 36 inches—very pale brown fine sand
36 to 51 inches—light gray fine sand

*Subsoil:*
51 to 64 inches—light brownish gray loamy fine sand

*Bedrock:*
64 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate to slow in the subsoil
*Available water capacity:* Low or moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 65 percent of the map unit and within a depth of 61 to 80 inches in about 23 percent. Where present, it is at a depth of about 30 to 75 inches. The best estimate for overall average depth to bedrock is 52 inches.

### *Minor Components*

*Dissimilar soils:*
- Tooles soils on flats
- Chaires soils, Chaires-like soils that have limestone below a depth of 60 inches, Leon soils, and Steinhatchee-like soils that do not have a loamy subsoil; in areas of flatwoods
- Seaboard soils in positions similar to those of the Lutterloh soil

*Similar soils:*
- Lutterloh soils that do not have limestone below a depth of 60 inches and Lutterloh-like soils that have a loamy subsoil within a depth of 40 inches; in positions similar to those of the Lutterloh soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderately high
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Moderate
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Fair
*Management concerns:* Wetness, poor filter, seepage, depth to rock, cutbanks cave, droughtiness, and corrosivity

*Management considerations:*
- The local Health Department can be contacted for guidance regarding sanitary facilities.
- Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
- Lawns need irrigation during periods of low rainfall.
- Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* North Florida Flatwoods

## 41—Tooles-Meadowbrook complex

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains and depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 50 acres

### *Composition*

Tooles and similar soils: 48 percent
Meadowbrook and similar soils: 32 percent
Dissimilar soils: 20 percent

### *Typical Profile*

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown sand

*Subsurface layer:*
9 to 31 inches—reddish yellow fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Meadowbrook—very deep
*Drainage class:* Poorly drained
*Permeability:* Tooles—slow in the subsoil; Meadowbrook—moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 61 percent of the map unit and within a depth of 61 to 80 inches in about 2 percent. Where present, it is at a depth of about 12 to 75 inches. The best estimate for overall average depth to bedrock is 44 inches.

### *Minor Components*

*Dissimilar soils:*
- Clara, Tennille, and Wekiva soils on flats
- Chaires soils, Chaires soils that have limestone below a depth of 60 inches, and Leon soils; in areas of flatwoods
- Lutterloh and Moriah soils on rises and knolls

*Similar soils:*
- Similar soils that have limestone bedrock within a depth of 80 inches; Goldhead soils; Meadowbrook soils that have limestone below a depth of 60 inches; and Tooles-like soils that have limestone at a depth of less than 40 inches, have a subsoil of loamy fine sand, or have limestone at a depth of more than 60 inches; in positions similar to those of the Tooles and Meadowbrook soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to wetness at the surface and ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness at the surface and ponding

### *Interpretive Groups*

*Land capability classification:* Tooles—IIIw; Meadowbrook—IVw

*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 45—Chaires fine sand, limestone substratum

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 250 acres

### *Composition*

Chaires and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 18 inches—gray fine sand

*Subsoil:*
18 to 24 inches—dark reddish brown fine sand
24 to 35 inches—brown fine sand
35 to 61 inches—grayish brown sandy clay loam

*Bedrock:*
61 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Deep and very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow or slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 34 percent of the map unit and within a depth of 61 to 80 inches in about 28 percent. Where present, it is at a depth of about 15 to 76 inches. The best estimate for overall average depth to bedrock is 58 inches.

### *Minor Components*

*Dissimilar soils:*
- Meadowbrook soils in depressions
- Chaires, wet, soils; Clara soils; Clara-like soils that have limestone bedrock; Goldhead soils; Meadowbrook soils; Meadowbrook soils that have a limestone substratum; Leon, wet, soils; Pottsburg, wet, soils; Tooles soils; Tennille soils; and Wekiva soils; on flats
- Leon soils, Pottsburg soils, Steinhatchee soils, Steinhatchee-like soils that have limestone at a depth of 20 to 40 inches, and Steinhatchee-like soils that do not have a loamy subsoil; on flatwoods

*Similar soils:*
- Chaires soils and Chaires-like soils that have an organic-stained subsoil at a depth 30 to 50 inches or that have a subsoil of loamy fine sand; in positions similar to those of the Chaires soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

#### Woodland

*Potential productivity:* Moderately high
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

#### Cropland

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.

• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, percs slowly, depth to rock, too sandy, cutbanks cave, droughtiness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* North Florida Flatwoods

## 46—Pits

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats, flatwoods, rises, and knolls
*Shape of areas:* Generally, square or rectangular
*Size of areas:* 5 to more than 20 acres

### *Composition*

Pits: 98 percent
Dissimilar soils: 2 percent

### *Typical Condition*

This map unit consists of excavations from which soil and other geologic material have been removed for use in road construction, foundations, septic tank absorption fields, or other purposes. The sides of the excavations have short, steep side slopes. Most pits are abandoned. Areas that have been excavated below the normal seasonal high water table usually contain water.

### *Soil Properties and Qualities*

*Depth class:* Variable
*Drainage class:* Poorly drained and very poorly drained
*Permeability:* Variable
*Available water capacity:* Variable
*Shrink-swell potential:* Variable
*Slope class:* Variable
*Hazard of flooding:* Variable
*Extent of rock outcrop:* Variable
*Parent material:* Sandy and loamy marine sediments, possibility overlying limestone
*Bedrock:* Variable

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to wetness at the surface and ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness at the surface and ponding

### *Interpretive Groups*

*Land capability classification:* VIIIs
*Woodland ordination symbol:* Not assigned
*Ecological community:* Not assigned

## 48—Wekiva-Tennille-Tooles complex, occasionally flooded

### *Setting*

*Landscape:* Gulf coast lowlands
*Landform:* Flats and depressions
*Shape of areas:* Rounded to long and narrow or irregular

*Size of areas:* 10 to more than 500 acres

### Composition

Wekiva and similar soils: 44 percent
Tennille and similar soils: 28 percent
Tooles and similar soils: 16 percent
Dissimilar soils: 12 percent

### Typical Profile

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—light gray fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

**Tennille**

*Surface layer:*
0 to 6 inches—black fine sand

*Substratum:*
6 to 14 inches—brown and dark grayish brown fine sand

*Bedrock:*
14 inches—soft, weathered, fractured limestone

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

### Soil Properties and Qualities

*Depth class:* Wekiva—shallow and moderately deep; Tennille—very shallow and shallow; Tooles—deep
*Drainage class:* Poorly drained
*Permeability:* Wekiva—moderately slow in the subsoil; Tennille—rapid throughout; Tooles—slow in the subsoil
*Available water capacity:* Low
*Flooding:* Occasional for brief periods
*Extent of rock outcrop:* None
*Shrink-swell potential:* Wekiva and Tennille—low; Tooles—moderate
*Slope class:* Nearly level
*Content of organic matter in the surface layer:* Wekiva—moderate or high; Tennille and Tooles—moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 98 percent of the map unit and within a depth of 61 to 80 inches in about 1 percent. Where present, it is at a depth of about 6 to 75 inches. The best estimate for overall average depth to bedrock is 24 inches.

### Minor Components

*Dissimilar soils:*
- Tennille-like soils that have a thick, dark surface layer; on flats
- Chaires soils, Chaires-like soils that have a limestone substratum, Steinhatchee soils, and Steinhatchee-like soils that do not have a loamy subsoil or that have limestone at a depth of less than 25 inches; in areas of flatwoods
- Matmon and Melvina soils on rises and knolls

*Similar soils:*
- Clara-like soils that have limestone below a depth of 60 inches, Meadowbrook soils, Tennille-like soils that have an organic-stained subsoil, and Wekiva-like soils that do not have a loamy subsoil; in positions similar to those of the Wekiva, Tennille, and Tooles soils

### Use and Management

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Poorly suited due to wetness at the surface and flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness at the surface and flooding

### Interpretive Groups

*Land capability classification:* Wekiva—Vw; Tennille and Tooles—VIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 49—Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 40 acres

### *Composition*

Seaboard and similar soils: 28 percent
Bushnell and similar soils: 25 percent
Matmon and similar soils: 23 percent
Dissimilar soils: 24 percent

### *Typical Profile*

**Seaboard**

*Surface layer:*
0 to 3 inches—dark grayish brown fine sand

*Substratum:*
3 to 8 inches—yellowish brown fine sand

*Bedrock:*
8 inches—soft, weathered, fractured limestone

**Bushnell**

*Surface layer:*
0 to 10 inches—dark grayish brown fine sand

*Subsurface layer:*
10 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 30 inches—yellowish brown sandy clay

*Bedrock:*
30 inches—soft, weathered, fractured limestone

**Matmon**

*Surface layer:*
0 to 4 inches—very dark grayish brown fine sand

*Subsurface layer:*
4 to 11 inches—yellowish brown fine sand

*Subsoil:*
11 to 19 inches—yellowish brown fine sandy loam

*Bedrock:*
19 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Seaboard—very shallow and shallow; Bushnell—moderately deep; Matmon—shallow
*Drainage class:* Seaboard—moderately well drained; Bushnell and Matmon—somewhat poorly drained
*Permeability:* Seaboard—rapid throughout; Bushnell—slow in the subsoil; Matmon—moderately slow in the subsoil
*Available water capacity:* Seaboard and Matmon—low; Bushnell—moderate
*Shrink-swell potential:* Seaboard and Matmon—low; Bushnell—moderate
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Seaboard—low; Bushnell—moderately low or moderate; Matmon—moderate or high
*Parent material:* Sandy and loamy marine sediments overlying limestone bedrock
*Bedrock:* Bedrock is within a depth of 60 inches in about 86 percent of the map unit and within a depth of 61 to 80 inches in about 3 percent. Where present, it is at a depth of about 2 to 70 inches. The best estimate for overall average depth to bedrock is 26 inches.

### *Minor Components*

*Dissimilar soils:*
- Chaires soils in areas of flatwoods
- Lutterloh soils, Mandarin soils, Moriah soils, Moriah-like soils that have limestone at a depth of 40 to 60 inches, Lutterloh-like soils that have a loamy subsoil at a depth of 15 to 40 inches, Otela soils, and Ridgewood soils; in positions similar to those of the Seaboard, Bushnell, and Matmon soils

*Similar soils:*
- Matmon-like soils that have limestone at a depth of 20 to 40 inches, Moriah-like soils that have limestone at a depth of 20 to 40 inches, Moriah-like soils that are moderately well drained, Seaboard-like soils that have limestone at a depth of less than 20 inches, Seaboard-like soils that have a gray to light gray subsurface layer over a brown and yellow subsoil, Seaboard-like soils that are somewhat poorly drained, and Tennille soils; in positions similar to those of the Seaboard, Bushnell, and Matmon soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Seabord—moderately high; Bushnell—high; Matmon—moderate
*Trees to plant:* Slash pine and loblolly pine

*Management concerns:* Equipment limitations, seedling mortality, windthrow, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Pine trees planted in areas where limestone is close to the surface do not grow to a commercially valuable size due to high pH levels.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Seaboard—not suited; Bushnell—moderate; Matmon—poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Crops produced on these soils need irrigation.

**Pasture and hayland**

*Suitability:* Seaboard—not suited; Bushnell—moderate; Matmon—moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Seaboard—moderate; Bushnell and Matmon—poor
*Management concerns:* Seaboard—depth to bedrock, seepage, wetness, too sandy, droughtiness, and corrosivity; Bushnell—depth to rock, wetness, percs slowly, too clayey, shrinking and swelling, low strength, and droughtiness; Matmon—depth to rock, wetness, percs slowly, too sandy, too clayey, and hard to pack
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Seaboard—VIs; Bushnell—IIIw; Matmon—IVs
*Woodland ordination symbol:* Seaboard—10S for slash pine; Bushnell—11W for slash pine; Matmon—9W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 51—Tooles-Nutall complex, frequently flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 10 to more than 800 acres

### *Composition*

Tooles and similar soils: 60 percent
Nutall and similar soils: 30 percent
Dissimilar soils: 10 percent

### *Typical Profile*

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Nutall**

*Surface layer:*
0 to 4 inches—black fine sand

*Subsurface layer:*
4 to 9 inches—mixed very dark gray and light gray fine sand
9 to 13 inches—light gray fine sand
13 to 17 inches—brown fine sand

*Subsoil:*
17 to 30 inches—light greenish gray sandy clay loam

*Bedrock:*
30 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Nutall—moderately deep
*Drainage class:* Poorly drained
*Permeability:* Slow in the subsoil
*Available water capacity:* Tooles—low or moderate; Nutall—moderate or high
*Shrink-swell potential:* Moderate
*Slope class:* Nearly level
*Flooding:* Frequent for long periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles—moderately low to high; Nutall—moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 36 percent of the map unit and within a depth of 61 to 80 inches in about 14 percent. Where present, it is at a depth of about 15 to 75 inches. The best estimate for overall average depth to bedrock is 45 inches.

### *Minor Components*

*Dissimilar soils:*
• Goldhead, Starke, and Tennille soils in positions similar to those of the Tooles and Nutall soils
• Similar soils that have a loamy subsoil within a depth of 40 inches; on rises and knolls

*Similar soils:*
• Goldhead-like soils that have limestone at a depth of more than 60 inches; Goldhead-like soils that have a loamy subsoil within a depth of 20 inches; Tooles-like soils that have a thick, dark surface layer; and Nutall-like soils that have a surface layer of muck; in positions similar to those of the Tooles and Nutall soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to flooding

### *Interpretive Groups*

*Land capability classification:* Tooles—VIIw; Nutall—Vw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Swamp Hardwoods

## 52—Clara, depressional-Clara-Meadowbrook complex, occasionally flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions and flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 120 acres

### *Composition*

Clara, depressional, and similar soils: 30 percent
Clara and similar soils: 29 percent
Meadowbrook and similar soils: 20 percent
Dissimilar soils: 21 percent

### *Typical Profile*

**Clara, depressional**

*Surface layer:*
0 to 2 inches—very dark gray fine sand

*Subsurface layer:*
2 to 18 inches—grayish brown fine sand

*Subsoil:*
18 to 37 inches—pale brown fine sand

*Substratum:*
37 to 50 inches—light gray fine sand
50 to 80 inches—very pale brown fine sand

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown fine sand

*Subsurface layer:*
6 to 19 inches—grayish brown fine sand

*Subsoil:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Clara, depressional—very poorly drained; Clara and Meadowbrook—poorly drained
*Permeability:* Clara—rapid throughout; Meadowbrook—moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Occasional for brief periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Clara and Clara, depressional—moderately low to high; Meadowbrook—moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 7 percent of the map unit and within a depth of 61 to 80 inches in about 9 percent. Where present, it is at a depth of about 17 to 75 inches. The best estimate for overall average depth to bedrock is 49 inches.

### *Minor Components*

*Dissimilar soils:*
- Clara-like soils that have a surface layer of highly decomposed organic matter that ranges from 8 to 16 inches in thickness; Tennille soils; Tennille-like soils that have a thick, dark surface layer; and Tooles soils; in depressions
- Leon soils on flats
- Chaires and Leon soils in areas of flatwoods
- Lutterloh, limestone substratum, soils; Lutterloh-like soils that have a loamy subsoil at a depth of 20 to 40 inches; and Melvina soils; on rises and knolls

*Similar soils:*
- Similar soils that have limestone bedrock within a depth of 80 inches; in positions similar to those of the Clara, depressional, Clara, and Meadowbrook soils
- Clara-like soils that do not have a subsurface layer; in depressions and on flats
- Meadowbrook, limestone substratum, soils on flats

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Clara, depressional—not suited; Clara and Meadowbrook—high
*Trees to plant:* Clara and Meadowbrook—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Clara, depressional—not suited; Clara—poor; Meadowbrook—poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Clara, depressional—not suited; Clara and Meadowbrook—moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Clara, depressional—not suited; Clara and Meadowbrook—poor
*Management concerns:* Clara—flooding, wetness, poor filter, seepage, too sandy, cutbanks cave, and corrosivity; Meadowbrook—wetness, percs slowly, seepage, too sandy, cutbanks cave, flooding, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Clara, depressional—VIIw; Clara—VIw; Meadowbrook—IVw
*Woodland ordination symbol:* Clara, depressional—not assigned; Clara and Meadowbrook—11W for slash pine
*Ecological community:* Clara, depressional—Shrub Bogs-Bay Swamps; Clara and Meadowbrook—North Florida Flatwoods

## 53—Bayvi muck, frequently flooded

### *Setting*

*Landscape:* Coastal swamps on the lower Coastal Plain
*Landform:* Salt marshes
*Shape of areas:* Long and narrow or irregular
*Size of areas:* 10 to more than 2,000 acres

### *Composition*

Bayvi and similar soils: 81 percent
Dissimilar soils: 19 percent

### *Typical Profile*

*Surface layer:*
0 to 5 inches—black muck

*Subsurface layer:*
5 to 17 inches—black mucky loamy sand
17 to 31 inches—very dark grayish brown sand

*Substratum:*
31 to 53 inches—grayish brown sand
53 to 80 inches—gray sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Rapid throughout
*Available water capacity:* Very low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Frequent for very long periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Very high
*Parent material:* Sandy and loamy marine sediments and, in places, the underlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 58 percent of the map unit and within a depth of 61 to 80 inches in about 6 percent. Depth to bedrock ranges from about 4 to 68 inches. The best estimate for overall average depth to bedrock is 38 inches.

### *Minor Components*

*Dissimilar soils:*
• Bayvi soils that have limestone bedrock within a depth of 80 inches; Leon-like, Lynn Haven-like, and Nutall-like soils that have tidal influence; soils that have a dark, organic-stained subsoil, a loamy subsoil, or limestone at a depth of 40 to 60 inches; soils that

have a loamy subsoil over limestone at a depth of 40 to 60 inches; and Tennille-like soils, some that have a thick, dark surface layer; in positions similar to those of the Bayvi soil

*Similar soils:*
• Similar soils that have limestone below a depth of 60 inches; in positions similar to those of the Bayvi soil

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to flooding

### *Interpretive Groups*

*Land capability classification:* VIIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Salt Marsh

## 54—Meadowbrook-Tooles-Clara, depressional, complex

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 60 acres

### *Composition*

Tooles and similar soils: 27 percent
Meadowbrook and similar soils: 20 percent
Clara and similar soils: 20 percent
Wekiva and similar soils: 15 percent
Dissimilar soils: 18 percent

### *Typical Profile*

**Meadowbrook**

*Surface layer:*
0 to 9 inches—dark grayish brown fine sand

*Subsurface layer:*
9 to 31 inches—very pale brown fine sand
31 to 58 inches—light gray fine sand

*Subsoil:*
58 to 80 inches—light brownish gray sandy clay loam

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Clara**

*Surface layer:*
0 to 6 inches—very dark grayish brown mucky fine sand

*Subsurface layer:*
6 to 19 inches—grayish brown fine sand

*Subsoil:*
19 to 32 inches—yellowish brown fine sand

*Substratum:*
32 to 80 inches—light gray fine sand

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Meadowbrook and Clara—very deep
*Drainage class:* Tooles and Meadowbrook—poorly drained; Clara—very poorly drained
*Permeability:* Meadowbrook—moderate or moderately slow in the subsoil; Tooles—slow in the subsoil; Clara—rapid throughout
*Available water capacity:* Low or moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles and Meadowbrook—moderately low or moderate; Clara—moderately low to high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 37 percent of the map unit and within a depth of 61 to 80 inches in about 7 percent. Where present, it is at a depth of about 12 to 78 inches. The best estimate for overall average depth to bedrock is 44 inches.

### *Minor Components*

*Dissimilar soils:*
• Meadowbrook soils in depressions

• Tennille-like soils that have limestone at a depth of 20 to 40 inches, Tennille soils, and Tooles-like soils that have limestone at a depth of 20 to 40 inches; on flats
• Boulogne, Chaires, Leon, and Steinhatchee soils in areas of flatwoods

*Similar soils:*
• Goldhead soils, Meadowbrook-like soils that have limestone below a depth of 60 inches, Meadowbrook-like soils that have a seasonal high water table at the surface to a depth of 6 inches, and Tooles-like soils that have an argillic horizon within a depth of 20 inches; on flats
• Osier soils and Osier-like soils that have a thick, dark surface layer; in depressions

## *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

### Woodland

*Potential productivity:* Tooles and Meadowbrook—high; Clara—unsuited
*Trees to plant:* Tooles and Meadowbrook—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, windthrow, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

### Cropland

*Suitability:* Tooles—fair; Meadowbrook—poor; Clara—not suited
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and reduce the hazard of erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

### Pasture and hayland

*Suitability:* Tooles—fair; Meadbrook—poor; Clara—not suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

### Urban development

*Suitability:* Tooles—poorly; Meadowbrook—poorly; Clara—not suited
*Management concerns:* Tooles and Meadowbrook—wetness, percs slowly, poor filter, seepage, too sandy, cutbanks cave, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

## *Interpretive Groups*

*Land capability classification:* Tooles—IIIw; Meadowbrook—IVw; Clara—VIIw
*Woodland ordination symbol:* Tooles and Meadowbrook—11W for slash pine; Clara—not assigned
*Ecological community:* Tooles and Meadowbrook—

North Florida Flatwoods; Clara—Shrub Bogs-Bay Swamps

## 55—Arents, moderately wet, rarely flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions and flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 30 acres

### *Composition*

Arents and similar inclusions: 95 percent
Dissimilar soils: 5 percent

### *Typical Profile*

This map unit is made up of heterogeneous overburden material that was removed from other areas and used in land leveling or as fill material to elevate building sites above natural soils. Typically, it consists of a 10-inch-thick surface layer over 22 inches of overburden. The surface layer and overburden are a mixture of fine sand and fragments of loamy subsoil material or dark, organic-stained subsoil material from the associated Chaires, Goldhead, Hurricane, Leon, and Mandarin soils. Typically, the overburden is variable, discontinuous, and has lenses, pockets, and streaks of black, gray, and grayish brown fine sand.

### *Minor Components*

*Dissimilar soils:*
• Similar soils that contain shell fragments, rocks, and organic matter

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Variable but generally rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Use and Management*

**Dominant uses:** Urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Moderate
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Crops produced in areas of this map unit do not normally need special erosion-control practices.
• Crops produced in areas of this map unit are not normally irrigated.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.

• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to wetness, poor filter, seepage, too sandy, cutbanks cave, droughtiness, corrosivity, and flooding

### *Interpretive Groups*

*Land capability classification:* VIs
*Woodland ordination symbol:* Not assigned
*Ecological community:* Not assigned

## 57—Sapelo fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and depressions
*Shape of areas:* Long and narrow or irregular
*Size of areas:* 5 to more than 140 acres

### *Composition*

Sapelo and similar soils: 81 percent
Dissimilar soils: 19 percent

### *Typical Profile*

*Surface layer:*
0 to 8 inches—black fine sand

*Subsurface layer:*
8 to 18 inches—light gray fine sand

*Upper subsoil:*
18 to 32 inches—dark reddish brown fine sand

*Substratum:*
32 to 46 inches—brown fine sand

*Lower subsoil:*
46 to 80 inches—gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Croatan, Evergreen, Leon, and Pamlico soils in depressions
• Leon soils in positions similar to those of the Sapelo soil

*Similar soils:*
• Mascotte soils in positions similar to those of the Sapelo soil

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to wetness at the surface and ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness at the surface and ponding

### *Interpretive Groups*

*Land capability classification:* VIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 58—Leon mucky fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 50 acres

### *Composition*

Leon and similar soils: 90 percent
Dissimilar soils: 10 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—black mucky fine sand

*Subsurface layer:*
6 to 10 inches—light gray fine sand

*Subsoil:*
10 to 14 inches—black fine sand
14 to 21 inches—dark reddish brown fine sand
21 to 42 inches—reddish brown and dark reddish brown fine sand

*Substratum:*
42 to 60 inches—brown fine sand
60 to 65 inches—grayish brown fine sand

*Second Subsoil:*
65 to 80 inches—dark reddish brown fine sand

### Soil Properties and Qualities

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately rapid or moderate in the subsoil
*Available water capacity:* Moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* High
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### Minor Components

*Dissimilar soils:*
- Evergreen and Pamlico soils in depressions
- Mascotte and Sapelo soils on flats
- Boulogne and Leon soils in areas of flatwoods

*Similar soils:*
- Leon-like soils that have a subsoil of loamy fine sand and Lynn Haven soils; in positions similar to those of the Leon soil

### Use and Management

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to wetness at the surface and ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness at the surface and ponding

### Interpretive Groups

*Land capability classification:* VIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 59—Arents, sanitary landfill

### Setting

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and flatwoods
*Shape of areas:* Rectangular
*Size of areas:* 5 to more than 30 acres

### Composition

Arents and similar inclusions: 95 percent
Dissimilar soils: 5 percent

### Typical Profile

This map unit is made up of heterogeneous overburden material that has been removed from other areas and used to cover garbage. It consists of a mixture of material from the associated Chaires, Goldhead, Hurricane, Leon, and Mandarin soils. Typically, the material is 2 to 3 feet thick, is variable, and has discontinuous lenses, pockets, and streaks of black, gray, and grayish brown fine sand overlying garbage. Few to common black and dark reddish brown, organic-stained, sandy fragments and gray fine sandy loam and sandy clay loam fragments are at a depth of 24 inches or more. The soil material overlies large cells of garbage and refuse. These cells range in thickness from 3 to 20 feet. In some areas, the mixture of sandy materials is used as daily cover and the garbage is in stratified layers within the sandy material.

### Minor Components

*Dissimilar soils:*
- Soils that contain shell fragments, rocks, organic matter, or muck; in positions similar to those of the Arents

### Soil Properties and Qualities

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained and moderately well drained
*Permeability:* Variable but generally rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Variable but generally nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### Use and Management

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to subsidence and variability of the soil properties

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to subsidence and variability of the soil properties

### *Interpretive Groups*

*Land capability classification:* VIIs
*Woodland ordination symbol:* Not assigned
*Ecological community:* Not assigned

## 60—Chaires, limestone substratum-Meadowbrook, limestone substratum, complex, rarely flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 50 to more than 80 acres

### *Composition*

Chaires and similar soils: 60 percent
Meadowbrook and similar soils: 19 percent
Dissimilar soils: 21 percent

### *Typical Profile*

**Chaires**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 18 inches—gray fine sand

*Subsoil:*
18 to 24 inches—dark reddish brown fine sand
24 to 35 inches—brown fine sand
35 to 61 inches—grayish brown sandy clay loam

*Bedrock:*
61 inches—soft, weathered, fractured limestone

**Meadowbrook**

*Surface layer:*
0 to 3 inches—very dark gray fine sand

*Subsurface layer:*
3 to 35 inches—grayish brown fine sand
35 to 58 inches—dark yellowish brown fine sand

*Subsoil:*
58 to 75 inches—dark gray sandy clay loam

*Bedrock:*
75 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Deep and very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Chaires—moderate; Meadowbrook—low
*Slope class:* Nearly level
*Flooding:* Rare
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Chaires—moderate or high; moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 33 percent of the map unit and within a depth of 61 to 80 inches in about 19 percent. Where present, it is at a depth of about 38 to 75 inches. The best estimate for overall average depth to bedrock is 47 inches.

### *Minor Components*

*Dissimilar soils:*
- Chaires, Clara, Goldhead, Leon, Lynn Haven, and Meadowbrook soils in depressions
- Chaires, Clara, Goldhead, Leon, and Tooles soils on flats
- Leon soils in areas of flatwoods

*Similar soils:*
- Chaires, limestone substratum, soils and Meadowbrook soils; on flats

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Chaires—moderate; Meadowbrook—high
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.

• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to wetness, percs slowly, poor filter, seepage, depth to rock, too sandy, cutbanks cave, droughtiness, corrosivity, and rare flooding

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* Chaires—10W for slash pine; Meadowbrook—11W for slash pine
*Ecological community:* North Florida Flatwoods

## 61—Wekiva-Tooles, depressional-Tennille complex, rarely flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 10 to more than 170 acres

### *Composition*

Wekiva and similar soils: 43 percent
Tooles and similar soils: 25 percent
Tennille and similar soils: 12 percent
Dissimilar soils: 20 percent

### *Typical Profile*

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—yellowish brown fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Tennille**

*Surface layer:*
0 to 6 inches—black fine sand

*Substratum:*
6 to 14 inches—brown and dark grayish brown fine sand

*Bedrock:*
14 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Wekiva—shallow and moderately deep; Tooles—deep; Tennille—very shallow and shallow
*Drainage class:* Wekiva and Tennille—poorly drained; Tooles—very poorly drained
*Permeability:* Wekiva—moderately slow in the subsoil; Tooles—slow in the subsoil; and Tennille—rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Wekiva—low; Tooles and Tennille—moderate
*Slope class:* Nearly level
*Flooding:* Rare
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Wekiva—moderate or high; Tooles and Tennille—moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 96 percent of the map unit and within a depth of 61 to 80 inches in about 3 percent. Where present, it is at a depth of about 5 to 75 inches. The best estimate for overall average depth to bedrock is 33 inches.

### *Minor Components*

*Dissimilar soils:*
- Tooles and Wekiva soils in depressions
- Meadowbrook and Tooles soils on flats
- Chaires soils, Steinhatchee soils, and Steinhatchee-like soils that have an organic-stained subsoil; in areas of flatwoods

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

#### Woodland

*Potential productivity:* Tennille—low; Wekiva and Tooles—not suited
*Trees to plant:* Tennille—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, windthrow, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

#### Cropland

*Suitability:* Wekiva and Tennille—poor; Tooles—not suited
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- Irrigation is not normally used for crops on these soils.

#### Pasture and hayland

*Suitability:* Wekiva and Tennille—moderately well suited; Tooles—not suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
- A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
- The proper spacing of tile drains is important for obtaining adequate drainage.
- Tile drains can provide a means of applying subirrigation during periods of low rainfall.
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

#### Urban development

*Suitability:* Not suited due to depth to rock, wetness, flooding, and corrosivity

### Interpretive Groups

*Land capability classification:* Wekiva—IVw; Tooles—VIIw; Tennille—Vw
*Woodland ordination symbol:* Wekiva—8W for slash pine; Tooles—not assigned; Tennille—8W for slash pine
*Ecological community:* Wekiva and Tennille—Wetland Hardwood Hammocks; Tooles—Shrub Bogs-Bay Swamps

## 62—Tooles-Tennille-Wekiva complex, depressional

### Setting

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 30 acres

### Composition

Tooles and similar soils: 45 percent
Tennille and similar soils: 25 percent
Wekiva and similar soils: 25 percent
Dissimilar soils: 5 percent

### Typical Profile

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Tennille**

*Surface layer:*
0 to 6 inches—black fine sand

*Substratum:*
6 to 14 inches—brown and dark grayish brown fine sand

*Bedrock:*
14 inches—soft, weathered, fractured limestone

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—yellowish brown fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

### Soil Properties and Qualities

*Depth class:* Tooles—deep; Tennille—very shallow and shallow; Wekiva—shallow and moderately deep
*Drainage class:* Very poorly drained
*Permeability:* Tooles—slow in the subsoil; Tennille—rapid throughout; Wekiva—moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Moderate
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles and Tennille—moderately low or moderate; Wekiva—moderate or high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 88 percent of the map unit and within a depth of 61 to 80 inches in about 6 percent. Where present, it is at a depth of about 15 to 75 inches. The best estimate for overall average depth to bedrock is 36 inches.

### Minor Components

*Dissimilar soils:*
- Goldhead soils in positions similar to those of the Tooles, Tennille, and Wekiva soils

*Similar soils:*
- Tooles-like soils that do not have a loamy subsoil

### Use and Management

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### Interpretive Groups

*Land capability classification:* VIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Shrub Bogs-Bay Swamps

## 63—Steinhatchee fine sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 20 acres

### *Composition*

Steinhatchee and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 5 inches—dark gray fine sand

*Subsurface layer:*
5 to 18 inches—gray fine sand

*Subsoil:*
18 to 22 inches—black fine sand
22 to 25 inches—dark brown fine sand
25 to 29 inches—yellowish brown fine sand
29 to 35 inches—gray sandy clay loam

*Bedrock:*
35 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Moderately deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Depth to bedrock (where present):* 24 to 40 inches

### *Minor Components*

*Dissimilar soils:*
- Meadowbrook, Tennille, and Tooles soils on flats
- Moriah soils on rises and knolls

*Similar soils:*
- Melvina soils in positions similar to those of the Steinhatchee soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Moderate
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
- A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
- The proper spacing of tile drains is important for obtaining adequate drainage.
- Tile drains can provide a means of applying subirrigation during periods of low rainfall.

• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Wetness, percs slowly, seepage, depth to rock, too sandy, cutbanks cave, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* Wetland Hardwood Hammocks

## 64—Tooles-Wekiva complex

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 30 acres

### *Composition*

Tooles and similar soils: 63 percent
Wekiva and similar soils: 27 percent
Dissimilar soils: 10 percent

### *Typical Profile*

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—yellowish brown fine sand

*Subsoil:*
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—yellowish brown fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Tooles—deep; Wekiva—shallow and moderately deep
*Drainage class:* Poorly drained
*Permeability:* Tooles—slow in the subsoil; Wekiva—moderately slow in the subsoil
*Available water capacity:* Low or moderate
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Tooles—moderately low or moderate; Wekiva—moderate or high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in nearly 100 percent of the map unit at a depth of about 28 to 60 inches. The best estimate for overall average depth to bedrock is 46 inches.

### *Minor Components*

*Dissimilar soils:*
• Meadowbrook soils on flats
• Moriah soils on rises and knolls

*Similar soils:*
• Tooles-like soils that have a loamy subsoil below a depth of 40 inches; in positions similar to those of the Tooles and Wekiva soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Tooles—high; Wekiva—not suited
*Trees to plant:* Tooles—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, windthrow, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish

seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Tooles—moderate; Wekiva—poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Tooles—well suited; Wekiva—poor
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor
*Management concerns:* Tooles—wetness, percs slowly, poor filter, seepage, depth to rock, too sandy, cutbanks cave, and corrosivity; Wekiva—depth to rock, wetness, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* Tooles—IIIw; Wekiva—IVw
*Woodland ordination symbol:* Tooles—11W for slash pine; Wekiva—8W for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 65—Yellowjacket and Maurepas mucks, frequently flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 10 to more than 100 acres

### *Composition*

Yellowjacket and similar soils: 45 percent
Maurepas and similar soils: 45 percent
Dissimilar soils: 10 percent

### *Typical Profile*

**Yellowjacket**

*Surface layer:*
0 to 42 inches—black muck

*Subsurface layer:*
42 to 60 inches—very dark gray fine sand

*Substratum:*
60 to 80 inches—dark grayish brown fine sand

**Maurepas**

*Surface layer:*
0 to 25 inches—dark brown muck

*Subsurface layer:*
25 to 60 inches—black muck

### Soil Properties and Qualities

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Rapid throughout
*Available water capacity:* Yellowjacket—high; Maurepas—very high
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Frequent for long periods
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Very high
*Parent material:* Sandy marine sediments and woody plant remains
*Depth to bedrock:* No bedrock within a depth of 80 inches

### Minor Components

*Dissimilar soils:*
• Yellowjacket-like soils that have limestone below a depth of 50 inches; in positions similar to those of the Yellowjacket and Maurepas soils

*Similar soils:*
• Soils that have a surface layer of organic matter that ranges from 8 to 16 inches in thickness; in positions similar to those of the Yellowjacket and Maurepas soils

### Use and Management

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to wetness and flooding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to wetness and flooding

### Interpretive Groups

*Land capability classification:* Yellowjacket—VIIw; Maurepas—VIIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Swamp Hardwoods

## 67—Yellowjacket and Maurepas mucks, depressional

### Setting

*Landscape:* Coastal swamps on the lower Coastal Plain
*Landform:* Depressions
*Landform position:* Concave
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 10 to more than 80 acres

### Composition

Yellowjacket and similar soils: 45 percent
Maurepas and similar soils: 40 percent
Dissimilar soils: 15 percent

### Typical Profile

**Yellowjacket**

*Surface layer:*
0 to 42 inches—black muck

*Subsurface layer:*
42 to 60 inches—very dark gray fine sand

*Substratum:*
60 to 80 inches—dark grayish brown fine sand

**Maurepas**

*Surface layer:*
0 to 25 inches—dark brown muck

*Subsurface layer:*
25 to 60 inches—black muck

### Soil Properties and Qualities

*Depth class:* Deep and very deep
*Drainage class:* Very poorly drained
*Permeability:* Rapid throughout
*Available water capacity:* Yellowjacket—high; Maurepas—very high
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Content of organic matter in the surface layer:* Very high
*Parent material:* Sandy marine sediments and woody plant remains
*Depth to bedrock:* No bedrock within a depth of 80 inches

### Minor Components

*Dissimilar soils:*
• Meadowbrook soils, Meadowbrook-like soils that have a surface layer of well decomposed organic matter that ranges from 8 to 16 inches in thickness, and Tooles soils; in positions similar to those of the Yellowjacket and Maurepas soils

*Similar soils:*
• Yellowjacket-like soils that have limestone bedrock within a depth of 80 inches and that have a

surface layer of well decomposed organic matter that ranges from 8 to 16 inches in thickness; in positions similar to those of the Yellowjacket and Maurepas soils

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Not suited due to ponding

**Cropland, hayland, pasture, and urban development**

*Suitability:* Not suited due to ponding

### *Interpretive Groups*

*Land capability classification:* Yellowjacket—VIIw; Maurepas—VIIIw
*Woodland ordination symbol:* Not assigned
*Ecological community:* Swamp Hardwoods

## 68—Matmon-Wekiva-Rock outcrop complex, occasionally flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises, knolls, flats, and flood plains
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 40 acres

### *Composition*

Matmon and similar soils: 40 percent
Wekiva and similar soils: 35 percent
Rock outcrop: 14 percent
Dissimilar soils: 11 percent

### *Typical Profile*

**Matmon**

*Surface layer:*
0 to 4 inches—very dark grayish brown fine sand

*Subsurface layer:*
4 to 11 inches—yellowish brown fine sand

*Subsoil:*
11 to 19 inches—yellowish brown fine sandy loam

*Bedrock:*
19 inches—soft, weathered, fractured limestone

**Wekiva**

*Surface layer:*
0 to 6 inches—black fine sand

*Subsurface layer:*
6 to 14 inches—yellowish brown fine sand

*Subsoil:*
14 to 21 inches—yellowish brown fine sandy loam

*Bedrock:*
21 inches—soft, weathered, fractured limestone

**Rock outcrop**

0 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Matmon—shallow; Wekiva—shallow and moderately deep; Rock outcrop—very shallow
*Drainage class:* Matmon—somewhat poorly drained; Wekiva—poorly drained
*Permeability:* Matmon and Wekiva—moderately slow in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Occasional for brief periods
*Extent of Rock outcrop:* Matmon and Wekiva—none; Rock outcrop—extensive
*Content of organic matter in the surface layer:* Matmon and Wekiva—moderate or high
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in nearly 100 percent of the map unit at a depth of about 7 to 23 inches. The best estimate for overall average depth to bedrock is 16 inches.

### *Minor Components*

*Dissimilar soils:*
- Matmon-like soils that have limestone below a depth of 20 inches in positions similar to those of the Matmon soil
- Steinhatchee soils in areas of flatwoods
- Tennille soils on flats

*Similar soils:*
- Matmon-like soils that do not have a loamy subsoil; in positions similar to those of the Matmon soil

### *Use and Management*

**Dominant uses:** Native vegetation and wildlife habitat

**Woodland**

*Potential productivity:* Matmon and Wekiva—low; Rock outcrop—unsuited
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, windthrow, and plant competition

*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Matmon and Wekiva—poor; Rock outcrop—not suited
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, fast intake, and depth to bedrock
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Matmon—poor; Wekiva—moderate; Rock outcrop—not suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, fast intake, and depth to bedrock
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to flooding, depth to bedrock, wetness, and corrosivity

### *Interpretive Groups*

*Land capability classification:* Matmon—IVs; Wekiva—Vw; Rock outcrop—VIIIs
*Woodland ordination symbol:* Matmon—9W for slash pine; Wekiva—8W for slash pine; Rock outcrop—not assigned
*Ecological community:* Wetland Hardwood Hammock

## 69—Eunola, Goldhead, and Tooles fine sands, commonly flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Shape of areas:* Long and narrow
*Size of areas:* 5 to more than 40 acres

### *Composition*

Eunola and similar soils: 49 percent
Goldhead and similar soils: 20 percent
Tooles and similar soils: 11 percent
Dissimilar soils: 20 percent

### *Typical Profile*

**Eunola**

*Surface layer:*
0 to 6 inches—brown loamy fine sand

*Subsurface layer:*
6 to 15 inches—yellowish brown fine sandy loam

*Subsoil:*
15 to 40 inches—yellowish brown sandy clay loam
40 to 50 inches—gray fine sandy loam

*Substratum:*
50 to 80 inches—white loamy fine sand

**Goldhead**

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 13 inches—grayish brown fine sand
13 to 35 inches—light yellowish brown fine sand

*Subsoil:*
35 to 55 inches—gray sandy clay loam

55 to 80 inches—light brownish gray fine sandy loam

**Tooles**

*Surface layer:*
0 to 8 inches—very dark gray fine sand

*Subsurface layer:*
8 to 23 inches—brown fine sand
23 to 35 inches—yellowish brown fine sand
35 to 46 inches—light gray sandy clay loam
46 to 55 inches—pale yellow clay loam

*Bedrock:*
55 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Eunola and Goldhead—very deep; Tooles—deep
*Drainage class:* Eunola—moderately well drained; Goldhead and Tooles—poorly drained
*Permeability:* Eunola—moderate in the subsoil; Goldhead—moderate or moderately slow in the subsoil; Tooles—slow in the subsoil
*Available water capacity:* Eunola—moderate; Goldhead—low; Tooles—low or moderate
*Shrink-swell potential:* Eunola and Goldhead—low; Tooles—moderate
*Slope class:* Nearly level
*Flooding:* Eunola—occasional for very brief periods; Goldhead and Tooles—frequent for long periods
*Extent of rock outcrop:* Low
*Content of organic matter in the surface layer:* Eunola—low or moderately low; Goldhead and Tooles—moderately low or moderate
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is within a depth of 60 inches in about 23 percent of the map unit and within a depth of 61 to 80 inches in about 8 percent. Where present, it is at a depth of about 36 to 70 inches. The best estimate for overall average depth to bedrock is 50 inches.

### *Minor Components*

*Dissimilar soils:*
• Moriah soils; Wekiva-like soils that are very poorly drained, that have a thick, dark surface layer, or that have limestone at a depth of 20 to 40 inches; and similar soils that are stained with sandy and loamy layers caused by flooding; on flood plains
• Hurricane soils on rises and knolls

*Similar soils:*
• Meadowbrook soils and Tooles-like soils that have a surface layer of muck; on flood plains

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Eunola—high; Goldhead and Tooles—not suited due to wetness and flooding
*Trees to plant:* Eunola—slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Eunola—moderately well suited; Goldhead and Tooles—not suited
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on these soils.

**Pasture and hayland**

*Suitability:* Eunola—moderately well suited; Goldhead and Tooles—not suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake

*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to flooding, wetness, seepage, cutbanks cave, and corrosivity

### *Interpretive Groups*

*Land capability classification:* Eunola—IIw; Goldhead—VIw; Tooles—VIw
*Woodland ordination symbol:* Eunola—10W for slash pine; Goldhead and Tooles—not assigned
*Ecological community:* Eunola—Upland Hardwood Hammocks; Goldhead and Tooles—Shrub Bogs-Bay Swamps

## 70—Chiefland-Chiefland, frequently flooded, complex

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Shape of areas:* Long and narrow or irregular
*Size of areas:* 10 to more than 100 acres

### *Composition*

Chiefland and similar soils: 75 percent
Dissimilar soils: 25 percent

### *Typical Profile*

**Chiefland**

*Surface layer:*
0 to 5 inches—dark gray fine sand

*Subsurface layer:*
5 to 17 inches—grayish brown fine sand
17 to 26 inches—pale brown fine sand

*Subsoil:*
26 to 35 inches—yellowish brown sandy clay loam

*Bedrock:*
35 inches—soft, weathered, fractured limestone

**Chiefland, frequently flooded**

*Surface layer:*
0 to 5 inches—dark gray fine sand

*Subsurface layer:*
5 to 17 inches—grayish brown fine sand
17 to 26 inches—pale brown fine sand

*Subsoil:*
26 to 35 inches—yellowish brown sandy clay loam

*Bedrock:*
35 inches—soft, weathered, fractured limestone

### *Soil Properties and Qualities*

*Depth class:* Moderately deep
*Drainage class:* Moderately well drained
*Permeability:* Moderate in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Chiefland—none; Chiefland, frequently flooded—frequent for brief periods
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Bedrock:* Bedrock is present within a depth of 40 inches in about 50 percent of the map unit. Where present, it is at a depth of about 35 to 55 inches. The best estimate for overall average depth to bedrock is 37 inches.

### *Minor Components*

*Dissimilar soils:*
• Moriah-like soils that have limestone below a depth of 40 inches and Ridgewood soils; on rises and knolls
• Nutall and Tooles soils on flats

*Similar soils:* None

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Urban development

**Woodland**

*Potential productivity:* Moderate
*Trees to plant:* Slash pine and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.

• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Not suited due to very low natural fertility, droughtiness, and rapid leaching of plant nutrients

**Pasture and hayland**

*Suitability:* Fair
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Droughtiness and fast intake
*Management considerations:*
• Intensive nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited
*Management concerns:* Chiefland—depth to rock, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity; Chiefland, frequently flooded—flooding, depth to rock, poor filter, seepage, too sandy, cutbanks cave, droughtiness, and corrosivity

### *Interpretive Groups*

*Land capability classification:* Chiefland—IIIs; Chiefland, frequently flooded—Vw
*Woodland ordination symbol:* 11S for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 71—Leon fine sand, rarely flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 5 to more than 75 acres

### *Composition*

Leon and similar soils: 78 percent
Dissimilar soils: 22 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 11 inches—grayish brown fine sand
11 to 25 inches—light gray fine sand

*Subsoil:*
25 to 30 inches—black fine sand
30 to 34 inches—dark reddish brown fine sand

*Substratum:*
34 to 56 inches—dark yellowish brown fine sand
56 to 80 inches—yellowish brown fine sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately rapid in the subsoil
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Flooding:* Rare
*Extent of rock outcrop:* None
*Parent material:* Sandy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Chaires, Meadowbrook, Osier, and Tooles soils and Osier-like soils that have a thick, dark surface layer; on flood plains and in depressions
• Chaires, Meadowbrook, Osier, Pottsburg, Tennille, Tooles, and Wekiva soils on flats
• Leon soils, Leon-like soils that have an organic-stained subsoil below a depth of 30 inches, and Steinhatchee soils; in areas of flatwoods
• Moriah and Ridgewood soils on rises and knolls

*Similar soils:*
• Chaires-like soils that have an organic-stained subsoil below a depth of 30 inches, do or do not have limestone below a depth of 60 inches, or have a loamy subsoil at a depth of less than 40 inches; in positions similar to those of the Leon soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* Moderately high
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.

• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Moderately well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to wetness, poor filter, seepage, too sandy, flooding, cutbanks cave, and corrosivity

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 8W for slash pine
*Ecological community:* Wetland Hardwood Hammocks

## 72—Chaires fine sand, rarely flooded

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to 30 acres

### *Composition*

Chaires and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 6 inches—very dark gray fine sand

*Subsurface layer:*
6 to 20 inches—light brownish gray fine sand

*Subsoil:*
20 to 26 inches—black fine sand
26 to 30 inches—dark reddish brown fine sand
30 to 52 inches—dark yellowish brown fine sand
52 to 80 inches—light gray and light olive gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow or slow in the subsoil
*Shrink-swell potential:* Moderate
*Slope class:* Nearly level
*Flooding:* Rare
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Meadowbrook, Osier, and Tooles soils in depressions
• Meadowbrook, Pottsburg, Tooles, Osier, and Wekiva soils on flats
• Steinhatchee soils in areas of flatwoods
• Melvina, Moriah, and Ridgewood soils on rises and knolls

*Similar soils:*
• Chaires-like soils that have an organic-stained subsoil at a depth of more than 30 inches; Chaires-like soils that have a loamy subsoil at a depth of less than 40 inches; similar soils that have limestone bedrock within a depth of 80 inches; in positions similar to those of the Chaires soils

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
• Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
• A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
• The proper spacing of tile drains is important for obtaining adequate drainage.
• Tile drains can provide a means of applying subirrigation during periods of low rainfall.
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Not suited due to wetness, percs slowly, depth to rock, too sandy, cutbanks cave, flooding, and corrosivity

### *Interpretive Groups*

*Land capability classification:* IVw
*Woodland ordination symbol:* 10W for slash pine
*Ecological community:* Wetland Hardwood Hammocks

## 73—Chipley sand, 0 to 5 percent slopes

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to more than 150 acres

### *Composition*

Chipley and similar soils: 77 percent
Dissimilar soils: 23 percent

### *Typical Profile*

*Surface layer:*
0 to 9 inches—brown sand

*Subsurface layer:*
9 to 48 inches—yellowish brown sand
48 to 69 inches—light yellowish brown sand
69 to 80 inches—light gray sand

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained

*Permeability:* Rapid throughout
*Available water capacity:* Low
*Shrink-swell potential:* Low
*Slope class:* Nearly level and gently sloping
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
• Wesconnett soils in depressions
• Goldhead, Lynn Haven, Osier, Plummer, and Pottsburg soils and Pottsburg-like soils that have a subsoil; on flats
• Boulogne and Leon soils in areas of flatwoods
• Ortega soils on rises and knolls

*Similar soils:*
• Chipley-like soils that have a thick surface layer and Hurricane soils; in positions similar to those of the Chipley soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine, loblolly pine, and longleaf pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
• Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
• Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
• Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
• Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.

**Cropland**

*Suitability:* Moderate
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Crop rotations that include close-growing cover crops improve tilth and help to control erosion.
• The cover crops and all crop residue should be returned to the soil.
• Good tilth and nutrient management are required for maximum yields.
• Special erosion-control practices are not normally needed.
• The irrigation of high-value crops is typically feasible where irrigation water is readily available.

**Pasture and hayland**

*Suitability:* Moderate
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
• Nutrient management maximizes yields.
• Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Moderate
*Management concerns:* Wetness, poor filter, seepage, too sandy, cutbanks cave, and droughtiness
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIs
*Woodland ordination symbol:* 11S for slash pine
*Ecological community:* Upland Hardwood Hammocks

## 74—Mascotte sand

### *Setting*

*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Shape of areas:* Rounded to long and narrow or irregular
*Size of areas:* 3 to 150 acres

### *Composition*

Mascotte and similar soils: 80 percent
Dissimilar soils: 20 percent

### *Typical Profile*

*Surface layer:*
0 to 4 inches—black sand

*Subsurface layer:*
4 to 10 inches—gray sand

*Subsoil:*
10 to 13 inches—very dark brown sand
13 to 17 inches—dark brown sand

*Second subsurface layer:*
17 to 25 inches—light yellowish brown sand
25 to 30 inches—grayish brown fine sand

*Second subsoil:*
30 to 80 inches—gray sandy clay loam

### *Soil Properties and Qualities*

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately slow in the subsoil
*Shrink-swell potential:* Low
*Slope class:* Nearly level
*Hazard of flooding:* None
*Extent of rock outcrop:* None
*Parent material:* Sandy and loamy marine sediments
*Depth to bedrock:* No bedrock within a depth of 80 inches

### *Minor Components*

*Dissimilar soils:*
- Surrency soils in depressions
- Clara, Osier, and Meadowbrook soils on flats
- Albany and Ocilla soils on rises and knolls

*Similar soils:*
- Mascotte-like soils that do not have a subsurface layer and a weak, organic-stained subsoil directly beneath the surface layer; Mascotte-like soils that have a loamy subsoil below a depth of 40 inches; in areas of flatwoods
- Sapelo soils in positions similar to those of the Mascotte soil

### *Use and Management*

**Dominant uses:** Timber production and wildlife habitat
**Other uses:** Crops, pasture, and urban development

**Woodland**

*Potential productivity:* High
*Trees to plant:* Slash pine and loblolly pine
*Management concerns:* Equipment limitations, seedling mortality, and plant competition
*Management considerations:*
- Site preparation, such as bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate.
- Chopping and bedding help to minimize debris, control competing vegetation, and facilitate planting.
- Using field machinery equipped with large tires or tracks and harvesting during dry periods help to overcome the equipment limitations and minimize soil compaction and root damage during thinning activities.
- Logging systems that leave plant debris well distributed over the site increase the content of organic matter and improve fertility.
- Trees in areas of this map unit respond well to applications of fertilizer.

**Cropland**

*Suitability:* Poor
*Commonly grown crops:* Corn, grain sorghum, and tobacco
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- Crop rotations that include close-growing cover crops at least two-thirds of the time improve tilth and help to control erosion.
- The cover crops and all crop residue should be returned to the soil.
- Good tilth and nutrient management are required for maximum yields.
- Special erosion-control practices are not normally needed.
- Irrigation is not normally used for crops on this soil.

**Pasture and hayland**

*Suitability:* Well suited
*Commonly grown grasses:* Bahiagrass and improved bermudagrass
*Management concerns:* Wetness, droughtiness, and fast intake
*Management considerations:*
- A total management system for the water table should remove excess water rapidly and provide a means of applying subirrigation.
- A combination of tile drains and open ditches may be needed to maintain the water table at the preferred depth.
- The proper spacing of tile drains is important for obtaining adequate drainage.
- Tile drains can provide a means of applying subirrigation during periods of low rainfall.
- Nutrient management maximizes yields.
- Controlled grazing helps to maintain vigorous plants and maximum yields.

**Urban development**

*Suitability:* Poor

*Management concerns:* Wetness, percs slowly, poor filter, seepage, thin layer, cutbanks cave, and corrosivity
*Management considerations:*
• The local Health Department can be contacted for guidance regarding sanitary facilities.
• Building structures on the highest part of the landscape and using artificial drainage reduce the risk of damage from wetness.
• Using corrosion-resistant materials reduces the risk of damage to uncoated steel and concrete.
• Lawns need irrigation during periods of low rainfall.
• Digging trenches during dry periods minimizes sloughing.

### *Interpretive Groups*

*Land capability classification:* IIIw
*Woodland ordination symbol:* 11W for slash pine
*Ecological community:* North Florida Flatwoods

# Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

This section can be used to plan the use and management of soils for crops and pasture; as rangeland and woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

## Woodland Management and Productivity

John K. Fish, county forester, Florida Division of Forestry, and Pete T. Kleto, forestry and soil resource consultant, helped prepare this section.

About 592,800 acres in Taylor County, or more than 87 percent of the county, is woodland (USDA, 1987). Forestry has played an important role in the economic growth of the county. After the early settlement of the county, longleaf pine dominated the better drained sites and slash pine dominated the wet flatwoods. Longleaf pine was the only tree that could withstand the fires set by settlers to clear woodland for grazing and for the production of agriculture crops. Baldcypress, pondcypress, black tupelo, sweetgum, red maple, and various bays were the main trees in areas along ponds, drainageways, and swamps and on the flood plains along rivers.

Harvesting timber, collecting pine gum resin, and cutting railroad crossties once provided many jobs to area residents. Some timber harvesting practices, however, have failed to provide for adequate regeneration of commercially important species. Also, exclusion of fire from the woods has allowed undesirable hardwoods to dominate and has further inhibited the establishment and growth of pine trees.

The soils and climate of the county are excellent for the management of southern pines. Slash pine is the dominant commercial tree and is planted throughout the county (fig. 5). Loblolly pine is planted to a small extent in the county. Natural stands of longleaf pine are scattered throughout the county in areas of Albany, Chipley, Chiefland, Eunola, Hurricane, Kershaw, Lutterloh, Mandarin, Matmon, Melvina, Ortega, Ousley, Resota, Ridgewood, and Seaboard soils.

Applying nitrogen, phosphorus, and potassium during planting encourages excellent growth response. Loblolly pine and slash pine grow best if adequate phosphorus is applied. The application of additional fertilizer at mid-rotation should be based on a soil test or tissue analysis.

Timber management in the county consists mainly of clearcutting and intensive site preparation. Pine stands are thinned for residual sawtimber and salvage purposes on a small scale in the area. Prescribed burning is very important for removing slash during site preparation, for reducing the hazard of wildfire in established stands, and for encouraging the growth of grasses and forbs, which provide food and cover for cattle and a diversity of wildlife.

Management practices that help to overcome the seasonal wetness and plant competition are used in

**Figure 5.—Young slash pine in an area of Albany fine sand. Plant competition is severe in areas of this soil. When the trees reach a height of 10 to 15 feet, controlled burning can help to control the plant competition.**

areas of poorly drained soils. The equipment limitations are severe during wet periods. Plant competition from heavy brush and hardwood sprouting can severely affect seedling survival and growth. Site preparation, such as chopping and bedding or double bedding, helps to establish seedlings, reduces the seedling mortality rate, and increases the early growth rate. Bedding should not block natural drainage.

The use of herbicides is becoming more widespread in the area. They are used for chemical site preparation to promote either natural or artificial regeneration and to release established pine stands from woody competition. This method of site preparation has several advantages over traditional mechanical methods. The advantages include increased control of competing vegetation at a lower cost, reduced hazard of erosion, and decreased soil compaction. The proper use of herbicides can reduce long-term costs by controlling hardwood resprouting, thereby increasing site productivity. Using herbicides and mechanical site preparation in conjunction can also greatly improve the survival and growth rates.

A high demand for timber is expected to continue well into the next century. This solid market has helped many landowners continue growing and managing their woodland for maximum production. To make the most of an investment in timber, the landowner should base decisions about which trees to plant on an evaluation of soil productivity and the quality of products produced at final harvest. Physical soil characteristics indicate productivity. The most important characteristic that affects production capacity is the ability of the soil to provide adequate moisture. Other factors include the thickness of the surface layer, the content of organic

matter in the surface layer, the natural supply of nutrients, the texture and consistency of the soil material, aeration, internal drainage, pH, and the depth to the water table.

Markets are plentiful for local wood producers. Six pulp mills are within a 60-mile radius of Taylor County. Chip-n-saw logs, poletimber, and veneer timber are aggressively marketed. Timber buyers and loggers are abundant; more than 20 companies serve the area. The market for cypress sawtimber is growing. Most cypress is sold locally for fencing and rough lumber. The residual material is sold for use as mulch.

An important function of trees is to protect the soil. A well managed stand of trees prevents soil deterioration and conserves soil and water resources. Erosion is not an important factor in most of the county; however, the ability of tree cover to increase the amount of moisture that enters the soil by reducing the impact of rain drops is an important factor affecting ground water supplies.

Management of woodland wildlife habitat is an important factor affecting recreation and the economy in the area. Current forestry practices, such as clearcutting and burning, favor food and cover for wildlife. Deer, turkey, feral hogs, and quail are the main game animals.

Individuals own thousands of acres of poorly stocked woodland throughout the county. Information that can help landowners increase productivity is available regarding individual soils and site selection (USDA, National Forestry Manual). More detailed information regarding woodland management can be obtained at the local office of the Natural Resources Conservation Service, the Florida Division of Forestry, or the Cooperative Extension Service.

Soils vary in their ability to produce trees. Depth, fertility, texture, and the available water capacity influence tree growth. Elevation, aspect, and climate determine the kinds of trees that can grow on a site. The available water capacity and depth of the root zone are major influences affecting tree growth.

Table 6 can be used by woodland owners or forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed. The table lists the ordination symbol for each soil. Soils assigned the same ordination symbol require the same general management and have about the same potential productivity.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for an indicator tree species (USDA, National Forestry Manual). The number indicates the volume, in cubic meters per hectare per year, which the indicator species can produce in a pure stand under natural conditions. The number 1 indicates low potential productivity; 2 or 3, moderate; 4 or 5, moderately high; 6 to 8, high; 9 to 11, very high; and 12 to 39, extremely high. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *W* indicates excess water in or on the soil and *S* indicates sandy texture. If a soil has more than one limitation, the priority is W then S.

In the table, *slight, moderate,* and *severe* indicate the degree of the major soil limitations to be considered in management.

*Equipment limitation* reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of *slight* indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of *moderate* indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of *severe* indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

*Seedling mortality* refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions. The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of *slight* indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of *moderate* indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of *severe* indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

*Windthrow hazard* is the likelihood that trees will be uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or other limiting layers. A rating of *slight* indicates that

under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of *moderate* indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of *severe* indicates that many trees can be blown down during these periods.

*Plant competition* ratings indicate the degree to which undesirable species are expected to invade and grow when openings are made in the tree canopy. The main factors that affect plant competition are depth to the water table and the available water capacity. A rating of *slight* indicates that competition from undesirable plants is not likely to prevent natural regeneration or suppress the more desirable species. Planted seedlings can become established without undue competition. A rating of *moderate* indicates that competition may delay the establishment of desirable species. Competition may hamper stand development, but it will not prevent the eventual development of fully stocked stands. A rating of *severe* indicates that competition can be expected to prevent regeneration unless precautionary measures are applied.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site quality* or a *site index* and as a *volume* number (Broadfoot, 1964; Schumaker, 1960; USDA, 1976; USDA 1985b; Barns, 1995). The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *volume*, a number, is the yield likely to be produced by the most important trees. This number, expressed as cubic feet per acre per year, indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

The *site quality* applies to fully stocked, even-aged, managed pine plantations. If a plantation is more that 10 years old, site quality curves for slash pine and loblolly pine can be used to estimate plantation site quality on a 25-year basis. Site index curves that have a base age of 50 are available for sand pine and second-growth natural longleaf pine. Because longleaf pine is most commonly managed for sawtimber products, all values for longleaf pine are based on site index.

The *productivity* is the yield likely to be produced by the most important trees, expressed in cords per acre per year. Production figures are based on a stocking of 400 even-aged trees per acre at 25 years of age. If a plantation of longleaf pine at age 25 has a site quality of 70, the expected yield is 3,870 cubic feet per acre. If 1 rough cord is equal to about 92.5 cubic feet, then the expected yield is 42 cords per acre. Wood fiber production may be significantly greater where intensive forest management practices are applied than in natural stands.

The first species listed under *common trees* for a soil is the indicator species for that soil. It generally is the most common species on the soil and is the one that determines the ordination class.

*Trees to plant* are those that are suitable for commercial wood production.

## Grazing Lands

Sid S. Brantly, range conservationist, National Resources Conservation Service, helped to prepare this section.

Grazing lands in Taylor County consist of tame pasture, which primarily supports bahiagrass or bermudagrass, and grazeable woodland, which supports native grasses, forbs, and legumes that are used for forage by livestock and wildlife. About 19,500 acres of tame pasture and 200,000 acres of grazeable woodland provide food and habitat for an estimated 6,100 head of cattle and countless wildlife (University of Florida, 1994). Many of the smaller, private tracts are fenced and provide grazing for livestock. Many of the larger wooded tracts owned by timber companies are fenced and are utilized for forage to a lesser degree.

Because forage production and availability are directly related to the tree canopy, the different age classes of trees cause a wide variation in forage production in a given tract. In some large areas, fencing provides adequate forage for a small number of cattle.

Grazeable woodland has an understory of native grasses, legumes, and forbs. The understory is an integral part of the woodland plant community. The native plants can be grazed without significantly impairing other woodland values. On such woodland, grazing is compatible with timber management if the grazing is controlled or managed so that timber and forage resources are maintained or enhanced.

Understory vegetation is grazed by livestock and by wildlife. Some woodland, if well managed, can produce enough understory vegetation to support grazing by optimum numbers of livestock or wildlife or both without damage to the trees. Prescribed burning and commercial thinning are examples of management practices.

Forage production on grazeable woodland varies according to the different kinds of grazeable woodland, the amount of shade cast by the canopy, the accumulation of fallen needles, the influence of time

and intensity of grazing on the grasses and forage, and the number, size, spacing, and method of site preparation for tree plantings.

The pastureland in Taylor County provides needed components of habitat for a host of wildlife species and provides filtration and storage for some of the freshwater supply. Livestock producers care for the land in such a way that it provides forage for a majority of the cattle in the county. Bahiagrass and bermudagrass are managed on much of the pastureland in the county. Sound management plans for pastureland usually include maintaining proper stubble height, controlling weeds, applying fertilizer and lime, and applying a planned grazing system. Stubble height on bahiagrass is successfully managed at about two inches. Short grazing periods are followed by three- or four-week rests. Stubble height on bermudagrass is best managed at about four inches. Four- to six-week rest periods are allowed between grazing.

## Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained for the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

## Crops and Pasture

William B. Pugh, Jr., district conservationist, and E. Norman Porter, resource conservationist, Natural Resources Conservation Service, helped prepare this section.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed for each soil, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

More than 20,500 acres in Taylor County is used for crops and pasture (University of Florida, 1994). The acreage used for crops and pasture has gradually been decreasing as land is used for urban development and timber production.

Erosion caused by water is not a major problem on the cropland and pastureland in the county. Information on the design of erosion-control practices for each kind of soil is available from the local office of the Natural Resources Conservation Service.

Soil blowing can be a hazard on the better drained, sandy soils and on the more poorly drained, sandy soils that have been drained. It can damage crops in a few hours if the wind is strong and the soil is dry and bare of vegetation or surface mulch. Soil blowing can be reduced by maintaining a vegetative cover or surface mulch; by planting permanent windbreaks of adapted plant species, such as pine, red cedar, and myrtle; and by planting properly spaced temporary strips of seasonal small grain or other annuals and perennials at a right angle to the prevailing damaging wind.

Soil drainage is a major management concern affecting most of the acreage used for crops and pasture in the county, including areas of the poorly drained Chaires, Leon, Mascotte, Meadowbrook, Osier, Plummer, Pottsburg, Sapelo, Steinhatchee, Tooles, and Wekiva soils. Albany, Chipley, Chiefland, Eunola, Hurricane, Lutterloh, Mandarin, Matmon, Melvina, Moriah, Ocilla, Ortega, Otela, Ousley, Resota, Ridgewood, and Seaboard soils have good natural drainage and tend to dry out quickly after rains. Irrigation is needed for crop production during periods of low rainfall.

Fertility is naturally low in most of the soils in the county. Also, most of the soils are naturally acid. The addition of lime and fertilizer should be based on the results of soil tests, on the needs of the crop, and on the expected level of yields. The Florida Cooperative Extension Service can help in determining the kinds and amounts of fertilizer and lime to apply.

Field crops grown in the county include corn, grain sorghum, and tobacco. The corn and grain sorghum are

**Figure 6.—A stand of perennial peanuts grazed by goats in an area of Ortega fine sand. Photo courtesy of Clay Olson, county extension director, University of Florida, Cooperative Extension Service.**

used as feed for livestock and poultry. Some peanuts are also grown in the county (fig. 6).

Farm income in the county is derived primarily from cow-calf livestock operations.

The main pasture plants in the county are improved bermudagrass and bahiagrass. Excess grass is harvested as hay and is either sold or used as winter feed. Millet, sorghum, and sudangrass hybrids are grown for green chop or grazing during the summer, and rye and oats are grown during the winter.

In areas that have similar climate and topography, differences in the kinds and amounts of forage a pasture can produce are related closely to the soil type. Pasture management is based on the relationship among soils, variety of pasture plants, lime and fertilizer, and grazing systems. Yields can be increased by adding lime and fertilizer as indicated by a soil test and by including a grass-legume mixture in the cropping system.

## Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 7. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification (USDA, 1961) of each map unit also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

## Land Capability Classes

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded (USDA, 1961). The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects.

Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit. Only class and subclass are used in this survey.

*Capability classes*, the broadest groups, are designated by numerals I through VIII. They are listed in table 7. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, *w* or *s,* to the class numeral, for example, IIw. The letter *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage), and *s* shows that the soil is limited mainly because it is shallow, droughty, or stony.

In class I there are no subclasses because the soils of this class have few limitations.

The capability classification of each map unit is given in the section “Detailed Soil Map Units” and in the yields table.

## Hydric Soils

G. Wade Hurt, national leader for hydric soils, Natural Resources Conservation Service, helped prepare this section.

In this section, hydric soils are defined and described and the hydric soil map units in the soil survey are indicated.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and a specific hydrology (Cowardin, 1979; Environmental Laboratory, 1987). Criteria for each of the characteristics must be met for areas to be identified as wetlands. The dominant natural vegetation on undrained hydric soils should be ecologically wetland species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. These soils are either saturated, inundated, or both long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or a nonhydric soil, however, specific information, such as information about the depth and duration of saturation, is needed. Thus, criteria that identify the estimated properties unique to hydric soils have been established (USDA, Field Indicators of Hydric Soils in the United States). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria are selected soil properties that are documented in “Soil Taxonomy,” “Keys to Soil Taxonomy,” the “National Soils Handbook,” and the “Soil Survey Manual” (USDA: 1975, 1998, 1993, and Nation Soil Survey Handbook).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators that can be used to make onsite determinations of hydric soils in Taylor County are specified in “Field Indicators of Hydric Soils in the United States.” These indicators are tested and revised through scientific methods. Updated information is available on the internet and at the State and local offices of the Natural Resources Conservation Service.

Hydric soils are generally identified by examining and describing the soil to a depth of about 20 inches. The determination of an appropriate indicator, however, may require investigation to a greater depth. Soil scientists excavate and describe the soils to a sufficient depth to understand the redoximorphic processes. After completing the soil description, soil scientists can compare the features required by each indicator and the conditions observed in the soil and

thereby determine which indicators occur. The soil can be identified as a hydric soil if one or more of the approved indicators occur.

This survey can be used to locate probable areas of hydric soils. Table 5 (Comprehensive Hydric Soils List) indicates which components and inclusions of the map unit meet the definition of hydric soils and also have at least one of the hydric soil indicators. This list can help in the planning of land uses, but onsite investigation is needed to determine if hydric soils occur at a specific site.

Map units consisting of hydric soils can have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils can have inclusions of hydric soils in the lower positions on the landform.

## Ecological Communities

John F. Vance, Jr., biologist, Natural Resources Conservation Service, helped prepare this section.

The ecological community concept is based on the knowledge that a soil type commonly supports a specific vegetative community, which in turn provides the habitat needed by specific wildlife species.

Vegetative communities form recognizable units on the landscape, most of which are apparent to the casual observer after only a little training. Even without prior botanical training, an observer can quickly learn to distinguish between pine flatwoods and pine-turkey oak sandhills, between hardwood hammocks and cypress swamps, and between mangrove swamps and salt marsh. Once a community is recognized, information can be found concerning the general characteristics of the soil on which it occurs and the types of plants and animals it supports.

Although some plants are found only within a very narrow range of conditions, many plants can survive throughout a wide range of conditions. Individual plants that have a wide tolerance level can occur in many different communities and on a variety of soils. When describing ecological communities, plant scientists study the patterns in which vegetation occurs. They study what species occur, the relative abundance of each species, the stage of plant succession, the dominance of species, the position of species on the landscape, and the soil or soils on which the patterns occur. Recognizable patterns of vegetation are usually found in a small group of soil types that have common characteristics. During many years of field observations while conducting soil surveys, the Natural Resources Conservation Service determined which vegetative communities commonly occur on which soils throughout Florida. This information is summarized in a booklet called "26 Ecological Communities of Florida" (USDA, 1985a).

In the following paragraphs, the vegetative community occurring on individual map units during the climax state of plant succession is described. The community described is based on relatively natural conditions. Human activities, such as commercial production of pine, agriculture, urbanization, and fire suppression, can alter the community on a specific site and should be considered.

### Longleaf Pine-Turkey Oak Hills

The Longleaf Pine-Turkey Oak Hills ecological community is dominated by longleaf pine and by turkey oak, bluejack oak, and sand post oak. Common shrubs include Adam's needle, coontie, coral bean, shining sumac, and yaupon. Pricklypear cactus, partridge pea, blazingstar, elephantsfoot, wiregrass, grassleaf goldaster, yellow Indiangrass, and dropseed are common. The map units that support the Longleaf Pine-Turkey Oak Hill ecological community in Taylor County are:

12 Ortega fine sand, 0 to 5 percent slopes
21 Kershaw fine sand, 0 to 8 percent slopes

### North Florida Flatwoods

The North Florida Flatwoods ecological community is normally dominated by slash pine and by live oak and sand live oak on slightly higher ridges and an understory of saw palmetto, gallberry, and grasses. Scattered pond pine, water oak, laurel oak, sweetgum, wax-myrtle, and several species of blueberry are also common. Chalky bluestem, broomsedge bluestem, lopsided Indiangrass, low panicums, switchgrass, and wiregrass are the common grasses. Other common plants include grassleaf goldaster, blackberry, brackenfern, deertongue, gayfeather, milkworts, and a variety of seed producing legumes. The map units that support the North Florida Flatwoods ecological community in Taylor County are:

3 Clara and Osier fine sands
5 Chaires fine sand
6 Leon fine sand
8 Meadowbrook sand
9 Sapelo fine sand
14 Boulogne part of Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes
17 Leon and Clara parts of Ousley-Leon-Clara complex, 0 to 3 percent slopes

19 Lutterloh part of Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes
20 Melvina-Mandarin complex, 0 to 3 percent slopes
23 Melvina-Moriah-Lutterloh complex
25 Pottsburg fine sand
27 Plummer fine sand
40 Lutterloh fine sand, limestone substratum
45 Chaires fine sand, limestone substratum
52 Clara and Meadowbrook parts of Clara, depressional-Clara-Meadowbrook complex, occasionally flooded
54 Meadowbrook and Tooles parts of Meadowbrook-Tooles-Clara, depressional, complex
60 Chaires, limestone substratum-Meadowbrook, limestone substratum, complex, rarely flooded
74 Mascotte sand

**Upland Hardwood Hammocks**

The Upland Hardwood Hammocks ecological community is normally dominated by black cherry, eastern hornbeam, flowering dogwood, hawthorns, laurel oak, laurelcherry, live oak, loblolly pine, longleaf pine, slash pine, pignut hickory, southern magnolia, sweetgum, and water oak and an understory of American beautyberry, arrowwood, sparkleberry, and wax-myrtle. Low panicums, wood oats, bluestem, and switchgrass are common grasses. Other common plants include aster, cat greenbrier, common greenbrier, crossvine, partridge pea, poison ivy, ragweed, Spanish moss, Virginia creeper, wild grape, yellow jessamine, dotted horsemint, and blackberry. The map units that support the Upland Hardwood Hammocks ecological community in Taylor County are:

10 Mandarin-Hurricane complex, 0 to 3 percent slopes
13 Hurricane fine sand, 0 to 3 percent slopes
14 Chipley part of Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes
15 Ridgewood fine sand, 0 to 3 percent slopes
16 Lutterloh-Ridgewood complex, 0 to 3 percent slopes
17 Ousley part of Ousley-Leon-Clara complex, 0 to 3 percent slopes
19 Otela and Ortega parts of Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes
22 Ocilla sand
24 Albany sand, 0 to 5 percent slopes
26 Resota-Hurricane complex, 0 to 5 percent slopes
29 Albany part of Albany-Surrency, depressional, complex, 0 to 3 percent slopes
49 Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes
64 Tooles-Wekiva complex
69 Eunola part of Eunola, Goldhead, and Tooles fine sands, commonly flooded
70 Chiefland-Chiefland, frequently flooded, complex
73 Chipley fine sand, 0 to 3 percent slopes

**Wetland Hardwood Hammocks**

The Wetland Hardwood Hammocks ecological community is normally dominated by cabbage palm, hawthorns, laurel oak, live oak, water oak, redbay, red maple, sweetbay, and magnolia and an understory of wax-myrtle, witchhazel, and saw palmetto. Longleaf uniola and low panicums are common grasses. Other common plants include cinnamon fern, crossvine, poison ivy, royal fern, Spanish moss, Virginia creeper, wild grape, and yellow jessamine. The map units that support the Wetland Hardwood Hammocks ecological community in Taylor County are:

61 Wekiva and Tennille parts of Wekiva-Tooles, depressional-Tennille complex, rarely flooded
63 Steinhatchee fine sand
68 Matmon-Wekiva-Rock outcrop complex, occasionally flooded
71 Leon fine sand, rarely flooded
72 Chaires fine sand, rarely flooded

**Salt Marsh**

The Salt Marsh ecological community is dominated by grasses and grasslike plants, such as smooth cordgrass, black needlerush, gulf cordgrass, marshhay cordgrass, olney bulrush, and seashore dropseed with seablite, sea oxeye, and seapurslane as herbaceous plants and vines (fig. 7). The map unit that supports the Salt Marsh ecological community in Taylor County is:

53 Bayvi muck, frequently flooded

**Swamp Hardwoods**

The Swamp Hardwoods ecological community is dominated by blackgum, red maple, Ogeechee lime, cypress, and bay trees. Common shrubs include fetterbush, Virginia willow, buttonbush, and wax-myrtle. Common herbaceous plants and vines include wild grape, greenbriers, and poison ivy, with maidencane grass, cinnamon fern, and sphagnum moss. The map units that support the Swamp Hardwoods ecological community in Taylor County are:

34 Clara and Bodiford soils, frequently flooded
38 Clara and Meadowbrook soils, depressional
51 Tooles-Nutall complex, frequently flooded
65 Yellowjacket and Maurepas mucks, frequently flooded
67 Yellowjacket and Maurepas mucks, depressional

**Figure 7.—An area of Bayvi muck, frequently flooded. Leon fine sand, rarely flooded is in the background. The Bayvi soil is in the Salt Marsh ecological community, and the Leon soil is in the Wetland Hardwood Hammocks ecological community. Photo courtesy of the Florida Game and Fresh Water Fish Commission.**

### Shrub Bogs-Bay Swamps

The Shrub Bogs-Bay Swamps ecological community is dominated by a dense mass of evergreen, shrubby vegetation. It is dominated by large gallberry, fetterbush, myrtleleaved holly, swamp cyrilla (titi), greenbriers, sweetpepperbush, and sweetbay. Scattered slash pine and pond pine are present. Cinnamon fern, maidencane grass, and club moss commonly fill open areas. Shrub bogs are predominantly dense masses of evergreen, shrubby vegetation that rarely exceeds 25 feet in height. Bay swamps are forested wetlands dominated by one or two species of evergreen trees. The bay swamp is considered to be a climax community with mature trees; the shrub bogs are in the earlier stages of plant succession. Periodic fires help to keep some areas in the shrub bog, or subclimax, stage, especially the titi types. The shrubs have many stems and thick foliage and commonly appear impenetrable. The map units that support the Shrub Bogs-Bay Swamps ecological community in Taylor County are:

14 Lynn Haven part of Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes
28 Surrency, Starke, and Croatan soils, depressional
29 Surrency part of Albany-Surrency, depressional, complex, 0 to 3 percent slopes
30 Dorovan and Pamlico soils, depressional
33 Wesconnett, Evergreen, and Pamlico soils, depressional
35 Tooles, Meadowbrook, and Wekiva soils, frequently flooded
37 Tooles and Meadowbrook soils, depressional
41 Tooles-Meadowbrook complex
48 Wekiva-Tennille-Tooles complex, occasionally flooded
52 Clara, depressional, part of Clara, depressional-Clara-Meadowbrook complex, occasionally flooded

54 Clara, depressional, part of Meadowbrook-Tooles-Clara, depressional, complex
57 Sapelo mucky fine sand
58 Leon mucky fine sand
61 Tooles, depressional, part of Wekiva-Tooles, depressional-Tennille Complex, rarely flooded
62 Tooles-Tennille-Wekiva complex, depressional
69 Goldhead and Tooles parts of Eunola, Goldhead, and Tooles fine sands, commonly flooded

## Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forest land, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. The slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 550 acres in the survey area, or about 0.8 percent of the total acreage, meets the soil requirements for prime farmland. Areas of this land are along the Aucilla River in the western part of the county, mainly in the Chaires-Meadowbrook-Clara, Sapelo-Surrency-Plummer, and Wekiva-Tooles-Chaires general soil map units.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The only soil in the survey area that is considered prime farmland is the Eunola part of map unit 69, Eunola, Goldhead, and Tooles fine sands, commonly flooded. This designation does not constitute a recommendation for a particular land use. Measures that overcome the flooding are needed. Onsite evaluation is needed to determine whether or not the hazard of flooding has been overcome by corrective measures. The extent of the map unit is shown in table 4. The location is shown on the detailed soil maps at the back of this publication. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

## Recreation

Recreation is an important land use in Taylor County. Areas used for recreation include State parks, city parks, campgrounds, golf courses, swimming pools, tennis courts, riding stables, fishing areas, boating areas, football and baseball stadiums, theaters, museums, and suburban neighborhood playgrounds.

The major recreational areas are located near the urban population. Boating, water skiing, and fishing are popular on all of the inland rivers and creeks and on the Gulf of Mexico. Large areas of woodland are used by private hunting clubs.

Recreational potential is high in Taylor County. The climate is conducive to outdoor recreational activities (fig. 8).

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In the table, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means

**Figure 8.—A golf course in an area of Leon fine sand.**

that soil properties are generally favorable and that limitations, if any, are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset by soil reclamation, special design, intensive maintenance, limited use, or a combination of these measures.

The information in the table can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 11 and interpretations for dwellings without basements and for local roads and streets in table 10.

*Camp areas* require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have mild slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

*Playgrounds* require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

*Paths and trails* for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be

required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

## Wildlife Habitat

John F. Vance, Jr., biologist, Natural Resources Conservation Service, helped to prepare this section.

Taylor County, which is mainly rural, provides good habitat for wildlife. The main habitats are the large swamps along the Gulf of Mexico, San Pedro Bay, and the Aucilla, Econfina, and Fenholloway Rivers and their tributaries and the large tracts of pine flatwoods. More than 592,000 acres consists of large tracts of commercial woodland.

Game species include white-tailed deer, squirrels, turkey, bobwhite quail, feral hogs, and waterfowl. Nongame species include raccoon, rabbit, armadillo, opossum, skunk, bobcat, gray fox, red fox, otter, and a variety of songbirds, wading birds, woodpeckers, predatory birds, reptiles, and amphibians.

The freshwater streams and the salt-water areas along the coast provide good fishing opportunities. The main species in the freshwater streams include largemouth bass, channel catfish, bullhead catfish, bluegill, redear sunfish, spotted sunfish, warmouth, black crappie, chain pickerel, gar, bowfin, and sucker. A wide variety of species, including spotted sea trout, flounder, mullet, red drum, and blue crabs, are in the salt-water areas.

A number of endangered and threatened species inhabit the county, including the seldom seen red-cockaded woodpecker. A detailed list of these species and information regarding their range and habitat needs are available at the local office of the Natural Resources Conservation Service.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 9, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

*Grain and seed crops* are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture are also considerations. Examples of grain and seed crops are corn, wheat, soybeans, browntop millet, and grain sorghum.

*Grasses and legumes* are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture are also considerations. Examples of grasses and legumes are bahiagrass, lovegrass, Florida beggerweed, clover, and sesbania.

*Wild herbaceous plants* are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, partridge pea, and bristlegrasses.

*Hardwood trees* and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of

hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, palmetto, blackcherry, sweetgum, wild grapes, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are firethorn, wild plum, American beautyberry, and crabapple.

*Coniferous plants* furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, cypress, cedar, and juniper.

*Wetland plants* are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

*Shallow water areas* have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

*Habitat for openland wildlife* consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, dove, meadowlark, field sparrow, cottontail, and red fox.

*Habitat for woodland wildlife* consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, bear, and feral hogs.

*Habitat for wetland wildlife* consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, egrets, shore birds, otter, mink, and beaver.

## Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

*Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.*

*The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.*

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

## Building Site Development

Table 10 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations, if any, are minor and easily overcome; *moderate* if soil properties or site features are somewhat restrictive for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable to overcome that special design, soil reclamation, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

*Dwellings* and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

*Local roads and streets* have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, frost action potential, and depth to a high water table affect the traffic-supporting capacity.

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

## Sanitary Facilities

Table 11 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations, if any, are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are somewhat restrictive for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or alteration.

The table also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

*Sewage lagoons* are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

The table gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a cemented pan, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

*Sanitary landfills* are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in the table are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a cemented pan, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to wind erosion.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

## Construction Materials

Table 12 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

*Roadfill* is soil material that is excavated in one

place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

*Sand* and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, stones, or soluble salts, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

## Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are

minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

*Pond reservoir areas* hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

*Aquifer-fed excavated ponds* are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

*Drainage* is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

*Irrigation* is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

*Terraces and diversions* are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

*Grassed waterways* are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

# Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics. These results are reported in table 17.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

## Engineering Index Properties

Table 14 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

*Depth* to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading "Soil Series and Their Morphology."

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as about 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 1993) and the system adopted by the American Association of State Highway and Transportation Officials (AASTHO, 1986).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. The AASHTO classification for soils tested is given in table 14.

*Rock fragments* 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3

inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

*Liquid limit* and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

## Physical and Chemical Properties

Table 15 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Clay* as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

*Moist bulk density* is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Permeability* refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

*Available water capacity* refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil layer. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

*Soil reaction* is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Salinity* is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

*Shrink-swell potential* is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to

buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; *high*, more than 6 percent; and *very high*, greater than 9 percent.

*Erosion factor K* indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.02 to 0.64. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their resistance to wind erosion in cultivated areas. The groups indicate the susceptibility of soil to wind erosion. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

*Organic matter* is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

## Soil and Water Features

Table 16 gives estimates of various soil and water features. The estimates are used in land use planning that involves engineering considerations.

*Hydrologic soil groups* are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to two hydrologic groups in the table, the first letter is for drained areas and the second is for undrained areas.

*Flooding*, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered

flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

The table gives the frequency and duration of flooding and the time of year when flooding is most likely.

Frequency, duration, and probable dates of occurrence are estimated. Frequency is expressed as none, rare, occasional, and frequent. *None* means that flooding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of flooding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of flooding is more than 50 percent in any year). *Common* is used when the occasional and frequent classes are grouped for certain purposes. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 days to 1 month, and *very long* if more than 1 month. Probable dates are expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

*High water table* (seasonal) is the highest level of a saturated zone in the soil in most years. The estimates are based mainly on observations of the water table at selected sites and on the evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. Indicated in the table are the depth to the seasonal high water table; the kind of water table—that is, perched or apparent; and the months of the year that the water table commonly is high. A water table that is seasonally high for less than 1 month is not indicated in the table.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. “More than 6.0” indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

*Depth to bedrock* is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. *Hardness of bedrock* is designated as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation. In most of Taylor County, the upper 6 inches to 2 feet of the bedrock is soft weathered limestone overlying hard unweathered limestone.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

# Physical, Chemical, and Mineralogical Analyses of Selected Soils

Mary E. Collins, professor of environmental pedology, Soil and Water Science Department, University of Florida, prepared this section.

Physical, chemical, and mineralogical properties of representative pedons sampled in Dixie, Jefferson, Lafayette, Madison, and Taylor counties are presented in tables 17, 18, 19, and 20. The soils were sampled in Dixie County in 1990; in Jefferson County in 1989 and 1990; in Lafayette County in 1989 and 1990; in Madison County in 1983, 1984, and 1985; and in Taylor County in 1988, 1989, and 1990. The soils sampled in these counties represent soils mapped in Taylor County. The analyses were conducted and coordinated by the Soil Characterization Laboratory at the University of Florida (USDA, 1961). Soils were sampled from pits of carefully selected pedons that are typical of the series. Detailed profile descriptions of the analyzed soils are given in alphabetical order in the section "Soil Series and Their Morphology." Laboratory data and profile information for other soils in Taylor County and other counties in Florida are on file at the Soil and Water Science Department, University of Florida.

Samples were air-dried, crushed, and sieved through a 2-millimeter screen. Particle-size distribution was determined using a modified pipette method with sodium hexametaphosphate as the dispersant. Hydraulic conductivity, bulk density, and water content were determined on undisturbed core samples. The content of organic carbon was determined using a modified version of the Walkley-Black wet combustion method. Extractable bases were obtained by leaching soils with ammonium acetate buffered at pH 7.0. The content of sodium and potassium in the extract was determined by flame emission, and the content of calcium and magnesium was determined by atomic absorption spectrophotometry. Extractable acidity was determined by the barium chloride-triethanolamine method at pH 8.2. Cation-exchange capacity was calculated by summation of extractable bases and extractable acidity. Base saturation is the ratio of extractable bases to cation-exchange capacity. The pH was measured with a glass electrode in water using a soil-water ratio of 1:1, in 0.01M calcium chloride solution using a soil-solution ratio of 1:2, and in 1 normal potassium chloride solution using a soil-solution ratio of 1:1.

Carbon, iron, and aluminum were extracted from probable spodic horizons using 0.1M sodium pyrophosphate. Determination of iron and aluminum was by atomic absorption spectroscopy, and determination of extracted carbon was by the Walkley-Black wet combustion method. Mineralogy of the clay fraction less than 2 microns was ascertained by X-ray diffraction. Peak heights at 18 angstrom, 14 angstrom, 7.2 angstrom, 4.83 angstrom, and 4.31 angstrom positions represent montmorillonite, interstratified expandable vermiculite or 14-angstrom intergrades, kaolinite, gibbsite, and quartz, respectively. Peaks were measured, summed, and normalized to give the percentage of soil minerals identified in the X-ray diffractograms. This percentage is not an absolute quantity but a relative distribution of clay minerals in the clay fraction. The absolute percentage would require additional knowledge of particle size, crystallinity, and crystal lattice substitution.

## Physical Analyses

The soils that were sampled for laboratory analyses in Taylor County and other counties as representative soils for Taylor County are inherently sandy; however, many of these soils have an argillic horizon in the lower part of the solum. The results of these analyses are reported in table 17. The total content of sand is more than 90 percent in one or more horizons in all of the sampled soils. Ortega, Osier, Mandarin, Hurricane, Leon, and Chipley soils contain more than 93 percent sand to a depth of 2 meters or more. Albany, Chaires, Lutterloh, Meadowbrook, and Otela soils contain more than 90 percent sand to a depth of slightly more than 1 meter.

The content of clay in the sandy horizons is rarely more than 3.5 percent. Deeper argillic horizons in the Albany, Chiefland, Chaires, Lutterloh, Mascotte, Meadowbrook, Melvina, Moriah, Nutall, Ocilla, Otela, Plummer, Sapelo, and Tooles soils contain larger amounts of clay, ranging from 10.8 to 37.4 percent.

The content of silt in the analyzed soils ranges from 0.1 to 11.5 percent. The highest content of silt is in the Albany, Lynn Haven, Meadowbrook, and Otela soils. All of the sampled horizons in the Albany and Otela soils contain more than 4.5 percent silt. All of the sampled horizons in the Chipley, Hurricane, Lutterloh, Ortega, Osier, Resota, Ridgewood, and Tennille soils contain less than 4 percent silt.

Fine sand dominates the sand fraction of all the soils in Taylor County. It commonly makes up more than 50 percent of the sand fraction. The content of very fine sand is more than 20 percent in one or more horizons in the Meadowbrook, Otela, and Sapelo soils. The content of medium sand is more than 20 percent in one or more horizons in the Albany, Bayvi, Chaires, Chiefland, Chipley, Leon, Mascotte, Meadowbrook,

Moriah, Ocilla, Osier, Resota, Seaboard, Tooles, and Wekiva soils. The content of coarse sand is more than 7.5 percent in one or more horizons in the Albany, Chaires, Chipley, Leon, Mascotte, and Osier soils. The content of very coarse sand generally ranges from nondetectable to about 2.3 percent. The very sandy soils, such as the Chipley and Ortega soils, rapidly become droughty during periods of low precipitation when rainfall is widely scattered. Soils that have inherently poor drainage remain saturated because ground water is close to the surface for long periods. Examples are the Chaires and Plummer soils

Hydraulic conductivity exceeds 25 centimeters per hour in all horizons in the Hurricane, Ortega, Osier, Resota, Ridgewood, and Tennille soils. Low hydraulic conductivity at a shallow depth, such as occurs in the Mascotte, Ocilla, and Sapelo soils, can affect the design and function of septic tank absorption fields. Albany, Mascotte, Melvina, Meadowbrook, Moriah, Ocilla, Otela, and Sapelo soils have one or more horizons that have hydraulic conductivity of 0.2 centimeter per hour or less. The available water for plants can be estimated from bulk density and water content data. Thick, sandy soils, such as Resota and Ridgewood soils, retain very low amounts of available water. Conversely, soils that have a higher content of organic matter or finer-textured material at shallower depths retain much larger amounts of available water. Examples are Pamlico muck and Mascotte sand.

## Chemical Analyses

The analyses of chemical properties reported in table 18 indicate that the soils in Taylor County contain a wide range of extractable bases. All of the soils that were sampled contained one or more horizons that have less than 1 milliequivalent per 100 grams extractable bases. Moriah soils have the largest amount of extractable bases, ranging up to 38.72 milliequivalents per 100 grams in the Bt2 horizon. Hurricane fine sand has the smallest amount, ranging from 0.00 to 0.11 milliequivalents per 100 grams. Hurricane, Mandarin, Mascotte, Ocilla, Ortega, Osier, Plummer, and Ridgewood soils contain less than 1 milliequivalent per 100 grams extractable bases in all horizons. Only one horizon in each of the Albany, Chipley, Leon, and Lynn Haven soils has more than 1 milliequivalent per 100 grams extractable bases.

Calcium is the dominant base in all of the sampled soils. In most of the soils, the largest content of calcium is in the Bt or Btg horizon. The overlying A and E horizons generally have a much lower content of calcium.

The highest content of magnesium is 12.76 milliequivalents per 100 grams in the Bt2 horizon of Moriah fine sand. The lowest content is 0.01 milliequivalents per 100 grams or less in one or more horizons of the Albany, Chaires, Chipley, Hurricane, Leon, Lutterloh, Mandarin, Mascotte, Melvina, Ortega, Osier, Pamlico, Plummer, Resota, Ridgewood, and Sapelo soils. The content of sodium generally is much less than 0.20 milliequivalents per 100 grams. Nearly all the soils contain 0.05 milliequivalents or less of sodium to a depth of 2 meters or more. The Lynn Haven and Pamlico soils, which have a mucky surface layer, contain higher levels of sodium in the surface layer.

All of the sampled soils contain one or more horizons that have 0.02 milliequivalents per 100 grams or less extractable potassium, except the Bayvi soils, which have horizons ranging up to 1.48 milliequivalents per 100 grams. One or more horizons of the Chaires, Chipley, Hurricane, Leon, Lutterloh, Lynn Haven, Mascotte, Melvina, Nutall, Ocilla, Ortega, Osier, Plummer, and Ridgewood soils, do not have detectable amounts of potassium.

Values for cation-exchange capacity (sum of cations), which is an indicator of plant-nutrient capacity, are more than 10 milliequivalents per 100 grams in the surface layer of the Chaires, Chiefland, Leon, Lynn Haven, Nutall, Pamlico, and Tennille soils. Soils that have low cation-exchange capacity in the surface layer require only small amounts of lime or sulfur to significantly alter the base status and soil reaction. Examples are the Moriah and Ortega soils. Generally, soils that have low inherent soil fertility are associated with low values for extractable bases and low cation-exchange capacity. Fertile soils are associated with high values for extractable bases, high values for base saturation, and high cation-exchange capacity.

The content of organic carbon in the surface layer is less than 1 percent in the Melvina, Moriah, Ortega, Osier, Plummer, Resota, and Tooles soils and less than 3 percent in all sampled soils, except the Lynn Haven, Nutall, Pamlico, and Tennille soils.

Electrical conductivity is less than 0.10 millimhos per centimeter in all sampled soils, except the Bayvi, Lynn Haven, Meadowbrook, Melvina, Moriah, Resota, and Tennille soils. Values of 0.01 millimhos per centimeter or less are in at least one horizon in the Chaires, Chipley, Hurricane, Leon, Mandarin, Osier, Otela, Pamlico, Sapelo, and Tooles soils. These data indicate that the content of soluble salt in the soils in Taylor County generally is insufficient to detrimentally affect the growth of salt-sensitive plants. The only exceptions may be the wet soils along the coastal areas.

Reaction of the sampled soils in water is generally between pH 3.8 and 5.5, but ranges from 7.0 to 7.7 in the Bt or Btg horizon in the Meadowbrook, Melvina, Moriah, and Nutall soils. Reaction of the sampled soils is generally about 0.2 to 1.0 pH unit lower in calcium chloride and potassium chloride than in water. Maximum availability of nutrients for plants generally is attained when soil reaction is between pH 6.5 and 7.0; however, maintaining soil reaction above pH 6.5 in Florida is not economically feasible for most agricultural production purposes.

Pyrophosphate extractable carbon, iron, and aluminum are in all of the Bh horizons. Soil morphology was used to determine the spodic horizons. Citrate-dithionite extractable iron and aluminum is in the Bt horizon of a few soils. The content of extractable iron ranges from 0.01 to 3.33 percent and is commonly less than 0.10 percent. The content of extractable aluminum ranges from 0.03 to 0.29 percent. The content of iron and aluminum in the soils in the county is not sufficient to detrimentally affect phosphorus availability.

### Mineralogical Analyses

The sand fractions of 2 to 0.05 millimeters are siliceous, and quartz is overwhelmingly dominant in all pedons. Varying amounts of heavy minerals are in most horizons. The greatest concentration is in the very fine sand fraction. No weatherable minerals are observed. Crystalline mineral components in the clay fraction of less than 0.002 millimeter are shown in table 19 for the major horizons of the sampled pedons. The clay mineralogical suite consists mostly of montmorillonite, a 14-angstrom intergrade, kaolinite, and quartz.

The montmorillonite is present only in selected horizons of the Chaires, Chipley, Leon, Lynn Haven, Mascotte, Nutall, Ortega, Plummer, Ridgewood, and Tooles soils. The 14-angstrom intergrade mineral is present in all of the soils that were analyzed. Kaolinite, generally the dominant clay mineral of the soils in Taylor County, is also present in all pedons of the sampled soils. The content of mica is insufficient for the assignment of numerical values. The Tooles soils are the only sampled soils that contain gibbsite.

The montmorillonite is generally inherited from the sediments in which the soils formed. The stability of montmorillonite is generally favored by high levels of pH in areas where the alkaline elements have not been leached by percolation of rainwater; however, montmorillonite can be present in moderate amounts regardless of drainage or chemical conditions.

The 14-angstrom intergrade, a mineral of uncertain origin, is widespread in Florida soils. It tends to be more prevalent under moderately acidic, relatively well drained conditions; however, it is present in a variety of soil environments. It is a major constituent of coatings of sand grains in Chipley soils, and the amount of coatings in these soils is sufficient to meet taxonomic criteria established for the recognition of coated Typic Quartzipsamments.

The Kaolinite is most likely inherited from the parent material, but some may have formed as a weathering product of other minerals. Kaolinite is relatively stable in the acidic environments of the soils in Taylor County.

The clay-sized quartz has primarily resulted from decrements of the silt fraction.

Clay mineralogy can have a significant impact on soil properties, particularly for soils that have a higher content of clay. Soils that contain montmorillonitic clay have a higher capacity for retaining plant nutrients than soils dominated by kaolinite, the 14-angstrom intergrade, or quartz. The clay mineralogy influences the use and management of soils in the county less frequently than the total content of clay.

## Engineering Index Test Data

Table 20 shows laboratory test data for several pedons sampled at carefully selected sites in the survey area. The tests were conducted to help evaluate the soils for engineering purposes. The classifications are based on data obtained by mechanical analyses and by tests that determine liquid limits and plastic limits. The pedons are representative of the series described in the section “Soil Series and Their Morphology.” The soil samples were tested by the Soils Laboratory, Florida Department of Transportation, Bureau of Materials and Research, Gainesville, Florida.

The testing methods generally are those of the American Association of State Highway and Transportation Officials (AASHTO) or the American Society for Testing and Materials (ASTM).

The tests and methods are AASHTO classification—M 145 (AASHTO), D 3282 (ASTM); Unified classification—D 2487 (ASTM); Mechanical analysis—T 88 (AASHTO), D 422 (ASTM), D 2217 (ASTM); Liquid limit—T 89 (AASHTO), D 4318 (ASTM); Plasticity index—T 90 (AASHTO), D 4318 (ASTM); and Moisture density—T 99 (AASHTO), D 698 (ASTM).

The mechanical analyses were made by combined sieve and hydrometer methods (USDA, 1992). In these methods, the various grain-sized fractions are calculated on the basis of all the material in the soil sample, including the material that is coarser than 2 millimeters in diameter. The mechanical analyses used in this method should not be used in naming textural classes of soils.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of the soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state, and the liquid limit is the moisture content at which the soil material changes from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic. The data on liquid limit and plasticity index in the table are based on laboratory tests of soil samples.

Compaction (or moisture density) data are important in earthwork. If soil material is compacted at a successively higher moisture content, assuming that the compaction effort remains constant, the density of the compacted material increases until the optimum moisture content is reached. After that, density decreases with increase in moisture content. The highest dry density obtained in the compaction test is termed maximum dry density. As a rule, maximum strength of earthwork is obtained if the soil is compacted to the maximum dry density.

# Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA, 1975; USDA, 1998). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 21 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Spodosol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquod (*Aqu*, meaning Aquic, plus *od*, from Spodosol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Alaquods (*Al*, meaning low iron content, plus *aquod*, the suborder of the Spodosols that has an Aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Alaquods.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle size, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is sandy, siliceous, thermic Typic Alaquods.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

## Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (USDA, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (USDA, 1975) and in "Keys to Soil Taxonomy" (USDA, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units of each soil series are described in the section "Detailed Soil Map Units."

### Albany Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate or moderately slow in the argillic or spodic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Chaires, Chipley, Eunola,

Hurricane, Leon, Lynn Haven, Mascotte, Ocilla, Ortega, Otela, Ousley, Plummer, Ridgewood, Sapelo, Starke, and Surrency soils

*Taxonomic class:* Loamy, siliceous, subactive, thermic Grossarenic Paleudults

**Typical Pedon**

Albany sand, 0 to 5 percent slopes, in Madison County, Florida; USGS Madison topographic quadrangle; about 2.4 miles north of Madison, 2.4 miles north of U.S. Highway 90, about 0.3 mile east of Florida Highway 53, NW$^{1}/_{4}$SW$^{1}/_{4}$ sec. 10, T. 1 N., R. 9 E.

A—0 to 10 inches; dark grayish brown (10YR 4/2) sand; weak fine granular structure; very friable; common fine and medium roots; very strongly acid; gradual wavy boundary.

E1—10 to 26 inches; grayish brown (10YR 5/2) sand; weak fine granular structure; very friable; common fine and medium roots; few fine prominent strong brown (7.5YR 5/8) iron accumulations; very strongly acid; gradual wavy boundary.

E2—26 to 37 inches; very pale brown (10YR 7/3) sand; few faint very pale brown (10YR 8/2) splotches and stripped areas in the matrix; few dark gray (10YR 4/1) pockets; weak fine granular structure; very friable; few fine and medium roots; few fine prominent strong brown (7.5YR 5/8) iron masses and pore linings; very strongly acid; gradual wavy boundary.

Eg—37 to 50 inches; light gray (10YR 7/2) sand; weak fine granular structure; very friable; common fine distinct yellowish brown (10YR 5/6) iron masses and pore linings; very strongly acid; abrupt wavy boundary.

Bt—50 to 57 inches; pale brown (10YR 6/3) fine sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; common fine faint light brownish gray (10YR 6/2) iron depletions; common fine prominent yellowish brown (10YR 5/8) iron masses; very strongly acid; clear wavy boundary.

Btg1—57 to 69 inches; light gray (10YR 7/1) sandy clay loam; moderate medium subangular blocky structure; firm; about 3 percent plinthite; sand grains coated and bridged with clay; common medium prominent strong brown (7.5YR 5/8) iron masses; extremely acid; gradual wavy boundary.

Btg2—69 to 80 inches; light gray (10YR 7/2) sandy clay loam; moderate medium subangular blocky structure; firm; sand grains coated and bridged with clay; common fine prominent red (2.5YR 4/6) and common medium prominent strong brown (7.5YR 5/8) iron masses; extremely acid.

**Range in Characteristics**

*Thickness of the solum:* 70 to 96 inches

*Reaction:* Extremely acid to slightly acid in the Ap or A horizon, except where lime has been added, and extremely acid to moderately acid in the E and B horizons

*A horizon:*
- Color—hue of 10YR to 5Y, value of 2 to 6, and chroma of 1 or 2; or neutral in hue and value of 2 to 6

*E, Eg, and E´g horizons (where present):*
- Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 8
- Redoximorphic features—few to many iron masses and pore linings in shades of yellow, olive, brown, and red at a depth of less than 30 inches
- Texture—sand or fine sand

*BE horizon (where present):*
- Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 3 to 8
- Redoximorphic features—few to many iron masses and pore linings in shades of yellow, brown, and red
- Texture—loamy sand or loamy fine sand

*Bt horizon:*
- Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 6 to 8
- Redoximorphic features—few to many iron depletions in shades of white or gray and iron masses in shades of yellow, brown, or red. In some pedons the horizon does not have a dominant matrix color and is multicolored in shades of yellow, brown, and gray.
- Texture—sandy loam, fine sandy loam, or sandy clay loam; in some pedons up to 3 percent plinthite and up to 5 percent gravel-sized ironstone fragments

*Btg horizon:*
- Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 or less
- Redoximorphic features—few to many iron depletions in shades of white or gray and iron masses in shades of yellow, brown, or red
- Texture—sandy loam, fine sandy loam, or sandy clay loam

## Bayvi Series

*Depth class:* Very deep

*Drainage class:* Very poorly drained

*Permeability:* Rapid throughout

*Parent material:* Sandy marine sediments
*Landscape:* Coastal swamps on the lower Coastal Plain
*Landform:* Salt marshes
*Commonly associated soils:* Chaires, Chipley, Clara, Leon, Meadowbrook, Nutall, Osier, Tooles, and Wekiva soils
*Taxonomic class:* Sandy, siliceous, thermic Cumulic Endoaquolls

**Typical Pedon**

Bayvi muck in Jefferson County, Florida; USGS Cobb Rocks topographic quadrangle; about 33 miles south of Monticello, 1,000 feet east and 900 feet north of the southwest corner of sec. 19, T. 4 S., R. 3 E.

Oa—0 to 5 inches; black (10YR 2/1) muck; about 30 percent fiber unrubbed, less than 5 percent rubbed; massive; sticky; many fine and medium roots; neutral when wet; gradual wavy boundary.
A1—5 to 17 inches; black (10YR 2/1) mucky loamy sand; massive; friable; slightly sticky; many fine and medium roots; neutral when wet; clear wavy boundary.
A2—17 to 31 inches; very dark grayish brown (10YR 3/2) sand; single grained; loose; many fine and medium roots; slightly acid when wet; gradual wavy boundary.
C1—31 to 53 inches; grayish brown (10YR 5/2) sand; few or common clean sand grains; single grained; loose; common fine and medium roots; slightly acid when wet; gradual wavy boundary.
C2—53 to 64 inches; gray (10YR 5/1) sand; few or common clean sand grains; single grained; loose; few fine roots; slightly acid when wet; gradual wavy boundary.
C3—64 to 80 inches; gray (10YR 6/1) sand; single grained; loose; slightly acid when wet.

**Range in Characteristics**

*Thickness of the solum:* 24 to 54 inches
*Depth to bedrock:* More than 60 inches
*Reaction:* Slightly acid to moderately alkaline in the natural wet state and extremely acid or very strongly acid when dry
*Sulfur content:* Low within a depth of 28 inches
*Salinity:* Very slightly saline to strongly saline

*Oa horizon:*
Color—hue of 10YR and value and chroma of 1 or 2
Texture—muck

*A horizon:*
Color—hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4
Texture—sand or mucky sand

*C horizon:*
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sand or loamy sand

## Bodiford Series

*Depth class:* Deep
*Drainage class:* Very poorly drained
*Permeability:* Moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Commonly associated soils:* Chaires, Meadowbrook, Tooles, and Wekiva soils
*Taxonomic class:* Loamy, siliceous, superactive, thermic Arenic Endoaqualfs

**Typical Pedon**

Bodiford muck in an area of Clara and Bodiford soils, frequently flooded, in Taylor County; USGS Crooked Point topographic quadrangle; about 33 miles south of Perry, 500 feet west and 1,000 feet north of the southeast corner of sec. 34, T. 8 S., R. 8 E.

Oa—0 to 12 inches; dark reddish brown (5YR 2/2) muck; 30 percent fiber unrubbed, 10 percent rubbed; weak fine granular structure; very friable; many fine, medium, and coarse roots; slightly acid; clear wavy boundary.
A—12 to 18 inches; black (10YR 2/1) mucky fine sand; moderate medium granular structure; very friable; many fine, medium, and coarse roots; slightly acid; clear wavy boundary.
E—18 to 29 inches; brown (10YR 5/3) fine sand; single grained; loose; few medium and coarse roots; neutral; clear wavy boundary.
Btg—29 to 51 inches; light brownish gray (10YR 6/2) sandy clay loam; weak coarse subangular blocky structure; friable; sand grains bridged and coated with clay; slightly alkaline; abrupt irregular boundary.
Cr—51 inches; light brownish gray (10YR 6/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Thickness of the solum:* 40 to 60 inches
*Depth to bedrock:* 40 to 60 inches

*Reaction:* Moderately acid to neutral in the Oa horizon, slightly acid to slightly alkaline in the A and E horizons, and neutral to moderately alkaline in the Btg horizon

*Oa horizon:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 4 or less; or neutral in hue and value of 4 or less
Texture—organic matter is composed mostly of decayed leaves, twigs, roots, and other sapric vegetative material. The content of fiber ranges from about 5 to 15 percent rubbed and from 20 to 35 percent unrubbed.

*A horizon:*
Color—hue of 10YR to 5YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
Texture—fine sand, loamy fine sand, or their mucky analogs

*E horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 to 4
Redoximorphic features—none to common iron masses and pore linings in shades of brown, yellow, or red
Texture—fine sand or loamy fine sand

*Btg horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—fine sandy loam or sandy clay loam

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Boulogne Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderately rapid in the spodic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Albany, Bayvi, Chaires, Chipley, Clara, Dorovan, Evergreen, Goldhead, Hurricane, Leon, Lutterloh, Lynn Haven, Mandarin, Mascotte, Maurepas, Meadowbrook, Melvina, Moriah, Nutall, Ortega, Osier, Pamlico, Pottsburg, Resota, Ridgewood, Sapelo, Starke, Steinhatchee, Tooles, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Sandy, siliceous, thermic Typic Alaquods

### Typical Pedon

Boulogne fine sand in an area of Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes, in Taylor County; USGS Perry topographic quadrangle; about 2 miles east of Perry, 600 feet north and 1,200 feet west of the southeast corner of sec. 29, T. 5 S., R. 8 E.

A—0 to 5 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; many fine and medium roots; extremely acid; abrupt wavy boundary.
Bh—5 to 14 inches; dark brown (7.5YR 3/2) fine sand; massive; very friable; common fine and medium roots; sand grains coated with organic matter; very strongly acid; clear wavy boundary.
C1—14 to 20 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; few fine roots; very strongly acid; gradual wavy boundary.
C2—20 to 31 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; few fine roots; very strongly acid; gradual wavy boundary.
C3—31 to 42 inches; light gray (10YR 7/2) fine sand; single grained; loose; strongly acid; gradual wavy boundary.
C4—42 to 80 inches; light gray (10YR 7/1) fine sand; single grained; loose; moderately acid.

### Range in Characteristics

*Thickness of the solum:* 80 inches or more

*Depth to bedrock:* More than 60 inches
*Reaction:* Extremely acid to moderately acid, except where lime has been added
*Texture:* Fine sand throughout

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2

*Incipient E horizon (where present; maximum thickness of 2 inches):*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

*Bh horizon:*
Color—hue of 7.5YR, value of 3, and chroma of 2 or 3

*E/Bh horizon (where present):*
Color—hue of 7.5YR, value of 4 or 5, and chroma of 2
Number of Bh fragments—few or common

*E horizon (where present):*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

*B´h horizon (where present):*
Color—hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 to 3

*C horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 1 or 2

## Bushnell Series

*Depth class:* Moderately deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Slow in the argillic horizon
*Parent material:* Sandy and clayey marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Knolls and rises
*Commonly associated soils:* Chaires, Lutterloh, Matmon, Meadowbrook, Melvina, Moriah, Ortega, Ousley, Plummer, Pottsburg, Resota, Seaboard, Surrency, Tennille, Tooles, Wekiva, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Fine, mixed, superactive, thermic Albaquic Hapludalfs

### Typical Pedon

Bushnell fine sand in an area of Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes, in Taylor County; USGS Jana topographic quadrangle; about 37 miles south-southeast of Perry, 1,300 feet east and 2,000 feet south of the northwest corner of sec. 32, T. 8 S., R. 10 E.

A—0 to 10 inches; dark grayish brown (10YR 4/2) fine sand; weak fine granular structure; very friable; many fine, medium, and coarse roots; very strongly acid; clear wavy boundary.
E—10 to 14 inches; yellowish brown (10YR 5/4) fine sand; common medium faint dark grayish brown (10YR 4/2) pockets and streaks; single grained; loose; common fine and medium roots; very strongly acid; abrupt wavy boundary.
Bt—14 to 30 inches; yellowish brown (10YR 5/6) sandy clay; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; 1 to 2 percent chert gravel; few fine and medium roots; common fine distinct gray (10YR 5/1) iron depletions; very strongly acid; abrupt wavy boundary.
Cr—30 inches; pale brown (10YR 6/3), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

### Range in Characteristics

*Thickness of the solum:* 20 to 40 inches
*Depth to bedrock:* 20 to 40 inches
*Depth to Bt horizon:* Less than 20 inches
*Rock fragments:* Gravel- to boulder-sized fragments of limestone or chert at the surface or in the solum in many areas
*Reaction:* Very strongly acid to neutral in the A and E horizons, except where lime has been added, and very strongly acid to moderately alkaline in the Bt horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 3 or 4, and chroma of 1 or 2
Thickness—where value is 3 and the A or Ap horizon directly overlies the Bt horizon, 6 inches or less with an abrupt boundary

*E horizon:*
Color—hue of 10YR, value of 4 to 6, and chroma of 3 or 4
Texture—fine sand or loamy fine sand

*Bt horizon:*
Color—hue of 10YR, value of 5 or 6, and chroma of 3 to 6
Redoximorphic features—few to many iron depletions in shades of gray within the upper 10 inches of the horizon
Texture—dominantly sandy clay or clay but may be sandy clay loam in the upper 10 inches and

have an average content of clay in the upper 20 inches of the argillic horizon ranging from 35 to 60 percent

*Btg horizon (where present):*
Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2
Redoximorphic features—few or common iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—sandy clay or clay

*Cr layer:*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Chaires Series

*Depth class:* Deep and very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate in the spodic horizon and moderately slow or slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments in places overlying limestone (fig. 9)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Albany, Bayvi, Bodiford, Chiefland, Evergreen, Goldhead, Leon, Lutterloh, Matmon, Maurepas, Meadowbrook, Melvina, Moriah, Nutall, Osier, Resota, Ridgewood, Seaboard, Starke, Steinhatchee, Tennille, Tooles, and Wekiva soils
*Taxonomic class:* Sandy, siliceous, thermic Alfic Alaquods

### Typical Pedon

Chaires fine sand in Taylor County; USGS Salem topographic quadrangle; about 17 miles southeast of Perry, 1,600 feet north and 800 feet east of the southwest corner of sec. 9, T. 7 S., R. 9 E.

Ap—0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; extremely acid; clear wavy boundary.
E—6 to 20 inches; light brownish gray (10YR 6/2) fine sand; single grained; loose; extremely acid; clear wavy boundary.
Bh1—20 to 26 inches; black (10YR 2/1) fine sand; weak fine subangular blocky structure; friable; sand grains coated with organic matter; extremely acid; clear wavy boundary.
Bh2—26 to 30 inches; dark reddish brown (5YR 3/3) fine sand; weak fine subangular blocky structure; friable; sand grains coated with organic matter; many fine and medium and common very fine roots; extremely acid; gradual wavy boundary.
Bw—30 to 52 inches; dark yellowish brown (10YR 4/4) fine sand; single grained; loose; many fine and medium roots; extremely acid; gradual wavy boundary.
Btg—52 to 80 inches; light gray (5Y 6/1) and light olive gray (5Y 6/2) sandy clay loam; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; many fine and medium roots; moderately acid.

### Range in Characteristics

*Thickness of the solum:* 50 to 80 inches or more
*Depth to bedrock:* 50 to more than 80 inches
*Reaction:* Extremely acid to strongly acid in the A, E, and Bh horizons, except where lime has been added, and very strongly acid to neutral in the Btg horizon

*A or Ap horizon:*
Color—hue of 10YR or 7.5YR, value of 2 to 4, and chroma of 2 or less
Thickness—less than 10 inches where value is less than 3.5

*E horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 2 or less; or neutral in hue and value of 5 to 8
Redoximorphic features—none to common iron masses and pore linings in shades of red, yellow, and brown or vertical streaks of black, very dark gray, or gray

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 3
Texture—sand, fine sand, or loamy fine sand

*Bw horizon (where present):*
Color—hue of 10YR or 7.5YR, value of 4, and chroma of 3 or 4
Texture—sand, fine sand, or loamy fine sand

*E´ horizon (where present):*
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 4

*Bh´ horizon (where present):*
Color—same range as the Bh horizon
Texture—same range as the Bh horizon

*Btg horizon:*
Color—hue of 10YR to 5GY, value of 4 to 7, and chroma of 1 or 2
Redoximorphic features—common or many iron depletions in shades of gray and none to common iron accumulations in shades of red, brown, or yellow
Texture—sandy loam, fine sandy loam, or sandy clay loam; in some pedons sandy clay in the lower part

*Cr layer (where present):*
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Chiefland Series

*Depth class:* Moderately deep
*Drainage class:* Moderately well drained
*Permeability:* Moderate in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone (fig. 10)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Ridges and knolls
*Commonly associated soils:* Boulogne, Chaires, Lutterloh, Melvina, Moriah, Ortega, and Otela soils
*Taxonomic class:* Loamy, siliceous, active, thermic Arenic Hapludalfs

### Typical Pedon

Chiefland fine sand in an area of Otela, limestone substratum-Chiefland-Kureb complex, 0 to 5 percent slopes, in Dixie County, Florida; USGS Hatchbend topographic quadrangle; about 8 miles east of Cross City, 1,950 feet south and 610 feet east of the northwest corner of sec. 35, T. 9 S., R. 13 E.

Ap—0 to 5 inches; dark gray (10YR 4/1) fine sand; salt-and-pepper appearance from the mixture of white sand grains and black organic matter; weak fine granular structure; very friable; many fine and medium roots; neutral; clear smooth boundary.
E1—5 to 17 inches; grayish brown (10YR 5/2) fine sand; common fine and medium faint light brownish gray (10YR 6/2) splotches of uncoated sand grains; single grained; loose; common fine and medium and few coarse roots; neutral; gradual wavy boundary.
E2—17 to 26 inches; pale brown (10YR 6/3) fine sand; single grained; loose; few fine and very fine roots; few fine distinct yellowish brown (10YR 5/6) iron masses and pore linings; few medium distinct light brownish gray (10YR 6/2) iron depletions; neutral; abrupt irregular boundary.
Bt—26 to 35 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few very fine and fine roots; sand grains coated and bridged with clay; about 3 percent limestone pebbles; common medium distinct brownish gray (10YR 6/2) iron depletions; neutral; abrupt irregular boundary.
2Cr—35 inches; pale brown (10YR 6/3), soft limestone bedrock.

### Range in Characteristics

*Solum thickness over soft limestone:* 24 to 60 inches; solution holes in which the solum extends to a depth of more than 60 inches in about 30 percent of the pedons
*Rock fragments:* 1 to 3 percent limestone boulders on the surface in many pedons
*Reaction:* Strongly acid to neutral in the A horizon, except where lime has been added, and moderately acid to moderately alkaline in the Bt horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 4 to 6, and chroma of 1 to 3

*E horizon:*
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 2 to 8

Redoximorphic features—none to common in shades of brown, yellow, or gray
Texture—sand or fine sand

*Bt horizon:*
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Redoximorphic features—few to many iron accumulations in shades of gray, brown, or yellow
Texture—sandy loam, fine sandy loam, or sandy clay loam
Rock fragments—3 to 10 percent limestone fragments
Thickness—4 inches to 4 feet
Base saturation—45 to 90 percent

*Cr or 2Cr layer:*
Color—hue of 10YR or 2.5Y, value of 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and interspersed with solution holes that range from 4 to 12 inches in diameter and that are filled with sandy loam to sandy clay textured soil material. The depth to limestone is variable within short lateral distances.

*2R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. Some areas have solution holes, which are filled with material from the Bt horizon or the Cr layer or both.

## Chipley Series

*Depth class:* Very deep
*Drainage class:* Moderately well drained and somewhat poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Bayvi, Boulogne, Evergreen, Hurricane, Kershaw, Leon, Lynn Haven, Mascotte, Ortega, Osier, Ousley, Plummer, Resota, Ridgewood, Sapelo, and Wesconnett soils
*Taxonomic class:* Thermic, coated Aquic Quartzipsamments

### Typical Pedon

Chipley sand in Taylor County; USGS Salem SW topographic quadrangle; about 23 miles southwest of Perry, 2.0 miles west of the Dixie County line and 1.8 miles north of U.S. Highway 19, about 3,000 feet south and 1,200 feet west of the northeast corner of sec. 3, T. 7 S., R. 9 E.

Ap—0 to 9 inches; brown (10YR 5/3) sand; single grained; loose; many fine to coarse roots; strongly acid; clear wavy boundary.
C1—9 to 25 inches; yellowish brown (10YR 5/4) sand; single grained; loose; common fine to coarse roots; very strongly acid; gradual wavy boundary.
C2—25 to 48 inches; yellowish brown (10YR 5/4) sand; single grained; loose; common fine and medium roots throughout; common fine and medium distinct yellowish brown (10YR 5/8) iron masses and pore linings; very strongly acid; gradual wavy boundary.
C3—48 to 69 inches; light yellowish brown (10YR 6/4) sand; single grained; loose; common fine prominent strong brown (7.5YR 5/8) iron masses and pore linings; common medium and coarse distinct light gray (10YR 7/2) stripped areas in the matrix; very strongly acid; gradual wavy boundary.
C4—69 to 80 inches; light gray (10YR 7/2) sand; single grained; loose; common medium and coarse distinct yellowish brown (10YR 5/6) iron masses and pore linings; very strongly acid.

### Range in Characteristics

*Thickness of the solum:* More than 80 inches
*Reaction:* Extremely acid to moderately acid in the A horizon, except where lime has been added, and very strongly acid to slightly acid in the C horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 5, and chroma of 1 or 2
Thickness—less than 10 inches where value is 3.5 or less

*C horizon:*
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 8
Redoximorphic features—few or common iron accumulations in shades of red, brown, or yellow at a depth of 16 to 40 inches; some pedons having a few streaks of gray to light gray uncoated sand grains along root channels in the upper part of the horizon

## Clara Series

*Depth class:* Very deep
*Drainage class:* Poorly drained or very poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains and depressions
*Commonly associated soils:* Bodiford, Croatan, Goldhead, Evergreen, Leon, Lynn Haven, Meadowbrook, Osier, Pottsburg, Starke, and Tooles soils
*Taxonomic class:* Siliceous, thermic Spodic Psammaquents

### Typical Pedon

Clara mucky fine sand in an area of Clara and Bodiford soils, frequently flooded, in Taylor County; USGS Warrior Swamp topographic quadrangle; about 10 miles south of Perry, 800 feet east and 200 feet north of the southwest corner of sec. 1, T. 6 S., R. 7 E.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) mucky fine sand; moderate medium granular structure; very friable; common medium roots; moderately acid; clear wavy boundary.
E—6 to 19 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; few fine and medium roots; moderately acid; gradual wavy boundary.
Bw—19 to 32 inches; yellowish brown (10YR 5/4) fine sand; single grained; loose; few fine and medium roots; slightly acid; gradual wavy boundary.
C—32 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; slightly acid.

### Range in Characteristics

*Thickness of the solum:* 20 to 60 inches; some pedons having a layer of muck that is up to 3 inches thick at the surface
*Reaction:* Extremely acid to moderately acid throughout, except where lime has been added

*A horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 2 or less rubbed

*E horizon:*
Color—hue of 10YR; value of 6 or 7 and chroma of 1 to 3 or value of 5 and chroma of 1 or 2; few or common vertical streaks in shades of red, brown, or gray. The vertical streaks are not present in all pedons where chroma is 1.

*Bw horizon:*
Color—hue of 10YR; value of 4 or 5 and chroma of 3 to 6 or value of 6 or 7 and chroma of 6. In some pedons where chroma is less than 6 in the upper part of the Bw horizon, this upper part has value 1 unit darker than in the overlying E horizon and has either small splotches, streaks, or discontinuous lenses or organically stained material having value of less than 4.
Redoximorphic features—few or common iron accumulations in shades of brown and yellow

*C horizon:*
Color—hue of 10YR; value of 5 and chroma of 2 or less or value of 6 or 7 and chroma of 3 or less
Redoximorphic features—few or common iron masses and pore linings in shades of brown or yellow

## Croatan Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Slow to moderately rapid in the organic matter and moderately rapid to moderately slow in the substratum
*Parent material:* Highly decomposed organic matter underlain by sandy marine and fluvial sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Clara, Dorovan, Pamlico, Starke, Surrency, and Tooles soils
*Taxonomic class:* Loamy, siliceous, dysic, thermic Terric Medisaprists

### Typical Pedon

Croatan muck in an area of Surrency, Starke, and Croatan soils, depressional, in Taylor County; USGS Fenholloway topographic quadrangle; about 5 miles east-southeast of Perry, 1,100 feet south and 500 feet west of the northeast corner of sec. 33, T. 4 S., R. 8 E.

Oa—0 to 25 inches; dark reddish brown (5YR 2/2) muck; less than 5 percent fiber rubbed; moderate fine granular structure in the upper part and massive in the lower part; few fine, medium, and coarse roots; extremely acid; gradual wavy boundary.
2Ag—25 to 31 inches; black (10YR 2/1) mucky fine sand; massive; very strongly acid; gradual wavy boundary.
2Cg1—31 to 39 inches; brown (7.5YR 5/2) fine sand; single grained; loose; very strongly acid; clear wavy boundary.
2Cg2—39 to 80 inches; grayish brown (10YR 5/2) sandy clay loam; massive; very strongly acid.

**Range in Characteristics**

*Thickness of the organic matter:* Commonly 16 to 35 inches; ranges to 51 inches
*Reaction:* Extremely acid in the organic matter to slightly acid in the underlying material
*Fiber content:* 3 to 30 percent unrubbed and less than 10 percent rubbed. Logs, stumps, and fragments of wood make up 0 to 10 percent of the organic layers. Charcoal particles and pockets of ash are present in some pedons.

*Oa horizon:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 2 or less
Consistency—very friable or friable, moist; slightly sticky or sticky (non-colloidal), wet

*2Ag horizon:*
Color—hue of 5YR to 5Y, value of 2 to 7, and chroma of 1 to 3
Texture—mucky fine sandy loam or fine sandy loam

*2Cg horizon:*
Color—hue of 5YR to 5GY or 5G, value 2 to 7, and chroma of 1; or hue of 5G or 5GY, value of 3 or less, and chroma of 1
Texture—variable, ranging from fine sand to clay

## Dorovan Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderate in the organic matter
*Parent material:* Highly decomposed organic matter
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Boulogne, Chipley, Croatan, Evergreen, Leon, Lynn Haven, Maurepas, Pamlico, Ridgewood, Sapelo, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Dysic, thermic Typic Medisaprists

**Typical Pedon**

Dorovan muck in an area of Dorovan and Pamlico soils, depressional, in Taylor County; USGS Greenville SE topographic quadrangle; about 14 miles north of Perry, 1,200 feet north and 600 feet west of the southeast corner of sec. 32, T. 2 S., R. 8 E.

Oa1—0 to 4 inches; very dark brown (10YR 2/2) muck; 10 percent fiber rubbed; weak fine granular structure; very friable; very strongly acid; gradual wavy boundary.
Oa2—4 to 72 inches; black (10YR 2/1) muck; 5 percent fiber rubbed; massive; very strongly acid; gradual wavy boundary.
2Cg—72 to 80 inches; black (10YR 2/1) mucky fine sand; single grained; loose; very strongly acid.

**Range in Characteristics**

*Thickness of organic matter:* 51 to more than 80 inches
*Reaction:* Extremely acid or very strongly acid in the organic layers and strongly acid or very strongly acid in the 2Cg horizon

*Oe horizon (where present):*
Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3; or neutral in hue and value of 2 to 4
Texture—40 to 90 percent fiber unrubbed and 20 to 60 percent rubbed

*Oa horizon:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 3; or neutral in hue and value of 2 or 3
Fiber content—10 to 40 percent fiber unrubbed, less than 1/6 of the volume when rubbed; a few logs and large fragments of wood typically in the lower part of the organic layers

*2Cg horizon (where present):*
Color—hue of 10YR to 5Y, value of 2 to 5, and chroma of 2 or less
Texture—fine sand to clay or their mucky analogs

## Eunola Series

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Permeability:* Moderate in the argillic horizon
*Parent material:* Loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Commonly associated soils:* Albany, Goldhead, Mascotte, Meadowbrook, Moriah, Ocilla, Plummer, Sapelo, Surrency, and Tooles soils
*Taxonomic class:* Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

**Typical Pedon**

Eunola loamy fine sand in an area of Eunola, Goldhead, and Tooles fine sands, commonly flooded, in Taylor County; USGS Nutall Rise topographic quadrangle; about 27 miles northwest of Perry, 2,050 feet east and 1,600 feet north of the southwest corner of sec. 2, T. 3 S., R. 4 E.

A—0 to 6 inches; brown (10YR 5/3) loamy fine sand; weak fine granular structure; very friable; many fine

and common medium and coarse roots; strongly acid; clear smooth boundary.
BE—6 to 15 inches; yellowish brown (10YR 5/6) fine sandy loam; weak fine subangular blocky structure; very friable; many fine, common medium, and few coarse roots; sand grains bridged and coated with clay; strongly acid; clear smooth boundary.
Bt1—15 to 22 inches; yellowish brown (10YR 5/8) sandy clay loam; weak fine subangular blocky structure; friable; common fine and few medium roots; sand grains bridged and coated with clay; strongly acid; gradual wavy boundary.
Bt2—22 to 30 inches; yellowish brown (10YR 5/8) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; sand grains bridged and coated with clay; few fine distinct strong brown (7.5YR 5/6) iron masses; strongly acid; clear smooth boundary.
Bt3—30 to 40 inches; yellowish brown (10YR 5/4) sandy clay loam; weak fine subangular blocky structure; friable; sand grains bridged and coated with clay; few fine roots; many medium distinct gray (10YR 5/1) iron depletions; strongly acid; gradual wavy boundary.
BC—40 to 50 inches; gray (10YR 5/1) fine sandy loam; weak coarse subangular blocky structure; friable; few fine roots; sand grains bridged and coated with clay; many fine distinct yellow (10YR 7/6) iron masses and light gray (10YR 6/1) iron depletions; strongly acid; clear wavy boundary.
C—50 to 80 inches; white (10YR 8/1) loamy fine sand; massive; very friable; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches
*Reaction:* Very strongly acid to slightly acid in the A horizon and the upper part of the B horizon, except where lime has been added, and very strongly acid to moderately acid in the lower part of the B horizon and in the C horizon

*A or Ap horizon:*
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3; or neutral in hue and value of 3 to 6
Texture—loamy fine sand or fine sandy loam

*E horizon (where present):*
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 to 4
Redoximorphic features—none to common iron masses and pore linings in shades of yellow or brown
Texture—loamy fine sand or fine sandy loam

*BE horizon:*
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—loamy fine sand or fine sandy loam

*Bt horizon:*
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; no dominant matrix hue in the lower part of the horizon in some pedons
Redoximorphic features—few to many in shades of red, yellow, and brown
Texture—sandy clay loam, sandy clay, or clay.

*Btg horizon (where present):*
Color—multicolored in shades of gray, red, and brown; or dominantly gray with brown or red redoximorphic features
Texture—sandy clay loam, sandy clay, or clay loam

*BC horizon:*
Color—multicolored in shades of gray, red, and brown; or dominantly gray with brown or red redoximorphic features
Texture—fine sandy loam, sandy loam, sandy clay loam, sandy clay, or clay loam

*C horizon:*
Color—hue of 5YR to 5Y, value of 4 to 8, and chroma of 1 to 8—gray colors common; multicolored in shades of gray, red, and brown in some pedons
Texture—variable

## Evergreen Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderately slow in the spodic horizon
*Parent material:* Thin layers of decomposed organic matter underlain by sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Boulogne, Chaires, Chipley, Clara, Dorovan, Hurricane, Leon, Lynn Haven, Mandarin, Pamlico, Pottsburg, Resota, Ridgewood, Sapelo, and Wesconnett soils
*Taxonomic class:* Sandy, siliceous, thermic Histic Alaquods

**Typical Pedon**

Evergreen muck in an area of Wesconnett, Evergreen, and Pamlico soils, depressional, in Taylor County; USGS Fenholloway topographic quadrangle; about 7 miles east of Perry, 2,500 feet south and 2,800 feet west of the northeast corner of sec. 35, T. 4 S., R. 8 E.

Oa—0 to 9 inches; dark brown (7.5YR 3/2) muck; 33 percent fiber unrubbed, 5 percent rubbed; massive; very friable; common coarse to fine roots; very strongly acid; gradual wavy boundary.
A—9 to 11 inches; black (10YR 2/1) mucky fine sand; weak medium granular structure; friable; common fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.
E—11 to 21 inches; dark gray (10YR 4/1) fine sand; single grained; loose; few fine, medium, and coarse roots; very strongly acid; clear wavy boundary.
Bh1—21 to 25 inches; dark brown (7.5YR 3/2) fine sand; moderate medium subangular blocky structure; friable; sand grains coated with organic matter; common medium and fine roots; very strongly acid; clear wavy boundary.
Bh2—25 to 50 inches; dark reddish brown (5YR 3/2) fine sand; weak medium subangular blocky structure; friable; sand grains coated with organic matter; very strongly acid; gradual wavy boundary.
Bw1—50 to 70 inches; strong brown (7.5YR 5/8) fine sand; single grained; loose; very strongly acid; gradual wavy boundary.
Bw2—70 to 80 inches; brownish yellow (10YR 6/8) fine sand; single grained; loose; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* More than 80 inches
*Reaction:* Extremely acid to strongly acid throughout

*Oa horizon:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Texture—10 to 33 percent fiber unrubbed and less than 10 percent rubbed
Thickness—8 to 14 inches

*A horizon:*
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3

*E horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2
Texture—sand or fine sand

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3; none to many small, black or dark reddish brown fragments in some part of the horizon
Texture—fine sand or loamy fine sand

*Bw horizon:*
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 8
Texture—fine sand or loamy fine sand

## Goldhead Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flood plains
*Commonly associated soils:* Chaires, Clara, Eunola, Leon, Meadowbrook, Nutall, Osier, Plummer, Ridgewood, Sapelo, Seaboard, Steinhatchee, and Tooles soils
*Taxonomic class:* Loamy, siliceous, active, thermic Arenic Endoaqualfs

**Typical Pedon**

Goldhead fine sand in an area of Eunola, Goldhead, and Tooles fine sands, commonly flooded, in Taylor County; USGS Lamont topographic quadrangle; about 24 miles northwest of Perry, 2,700 feet north and 900 feet west of the southeast corner of sec. 21, T. 2 S., R. 5 E.

A—0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; many fine and medium and few coarse roots; strongly acid; clear wavy boundary.
Eg1—6 to 13 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; common fine and few medium roots; slightly acid; gradual wavy boundary.
Eg2—13 to 35 inches; light yellowish brown (2.5Y 6/2) fine sand; single grained; loose; few fine roots; slightly acid; clear wavy boundary.
Btg1—35 to 55 inches; gray (10YR 5/1) sandy clay loam; weak coarse subangular blocky structure; friable; sand grains bridged and coated with clay; few fine roots; neutral; gradual wavy boundary.
Btg2—55 to 80 inches; light brownish gray (10YR 6/2) fine sandy loam; massive; very friable; sand grains coated and bridged with clay; mildly alkaline.

**Range in Characteristics**

*Thickness of the solum:* 35 to more than 60 inches
*Reaction:* Very strongly acid to slightly alkaline in the A and E horizons, except where lime has been added, and very strongly acid to moderately alkaline in the B and C horizons

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 or 3

*Eg horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Redoximorphic features—none to common iron masses and pore linings in shades of red, yellow, or brown
Rock fragments—0 to 5 percent ironstone nodules, quartz gravel, or weathered phosphatic limestone

*Btg horizon:*
Color—hue of 10YR to 5Y or 5GY, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
Redoximorphic features—none to common iron depletions in shades of gray and iron accumulations in shades of yellow, brown, and red
Rock fragments—0 to 25 percent ironstone nodules, quartz gravel, or weathered phosphatic limestone
Texture—loamy fine sand, fine sandy loam, sandy clay loam, or their gravelly analogs

*Cg horizon (where present):*
Color—hue of 10YR to 5Y or 5GY, value of 5 to 7, and chroma of 1; or neutral in hue and value of 4 to 8
Redoximorphic features—none to common iron accumulations in shades of yellow or brown
Texture—fine sand or loamy fine sand

## Hurricane Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderately rapid in the spodic horizon
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Boulogne, Chipley, Evergreen, Leon, Lynn Haven, Mandarin, Melvina, Nutall, Ortega, Osier, Otela, Ousley, Pamlico, Plummer, Pottsburg, Resota, Ridgewood, Sapelo, Seaboard, and Wesconnett soils
*Taxonomic class:* Sandy, siliceous, thermic Oxyaquic Alorthods

### Typical Pedon

Hurricane fine sand, 0 to 3 percent slopes, in Taylor County; USGS Steinhatchee topographic quadrangle; about 37 miles south-southeast of Perry, 3,700 feet east and 100 feet north of the southwest corner of sec. 1, T. 9 S., R. 9 E.

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) fine sand; single grained; loose; extremely acid; clear wavy boundary.
E1—8 to 22 inches; light yellowish brown (10YR 6/4) fine sand; single grained; loose; extremely acid; gradual wavy boundary.
E2—22 to 32 inches; very pale brown (10YR 7/4) fine sand; single grained; loose; few fine distinct brownish yellow (10YR 6/6 and 6/8) iron masses and pore linings; extremely acid; gradual wavy boundary.
E3—32 to 48 inches; yellow (10YR 7/6) fine sand; single grained; loose; common fine and medium distinct very pale brown (10YR 7/3) and common fine and medium faint brownish yellow (10YR 6/6) iron masses and pore linings; very strongly acid; clear wavy boundary.
E4—48 to 63 inches; white (10YR 8/1) fine sand; single grained; loose; common fine and medium distinct brownish yellow (10YR 6/6) and light yellowish brown (10YR 6/4) iron masses and pore linings; very strongly acid; clear wavy boundary.
Bh1—63 to 69 inches; brown (7.5YR 4/2) fine sand; many coarse faint brown (7.5YR 5/2) splotches; common medium and coarse faint very dark grayish brown (10YR 3/2) Bh bodies; single grained; loose; about 60 percent of the sand grains coated with organic matter; very strongly acid; gradual wavy boundary.
Bh2—69 to 80 inches; black (5YR 2/1) fine sand; massive; very friable; sand grains coated with organic matter; extremely acid.

### Range in Characteristics

*Thickness of the solum:* More than 60 inches
*Reaction:* Extremely acid to moderately acid throughout, except where lime has been added

*A or Ap horizon:*
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3; or neutral in hue and value of 4 or 5

*E horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 to 8—chroma of 1 or 2 common in the lower part; in some pedons low-chroma mottles as splotches that are not indicative of wetness below a depth of 20 inches
Redoximorphic features—few or common iron masses and pore linings in shades of red, yellow, and brown at a depth of 18 to 42 inches

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 2 to 5, and chroma of 4 or less
Texture—fine sand or loamy fine sand

## Kershaw Series

*Depth class:* Very deep
*Drainage class:* Excessively drained
*Permeability:* Very rapid throughout
*Parent material:* Thick, sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Chipley, Ortega, Otela, Ousley, Resota, Ridgewood, and Wesconnett soils
*Taxonomic class:* Thermic, uncoated Typic Quartzipsamments

### Typical Pedon

Kershaw fine sand, 0 to 8 percent slopes, in Taylor County; USGS Salem SW topographic quadrangle; about 27 miles south of Perry, 1,200 feet north and 400 feet west of the southeast corner of sec. 2, T. 8 S., R. 8 E.

A—0 to 6 inches; dark grayish brown (10YR 4/2) fine sand; many fine and medium and few coarse roots; very strongly acid; abrupt wavy boundary.
C1—6 to 42 inches; yellowish brown (10YR 5/6) fine sand; single grained; loose; many very fine, fine, medium, and coarse roots; very strongly acid; clear wavy boundary.
C2—42 to 64 inches; brownish yellow (10YR 6/6) fine sand; single grained; loose; few very fine and fine roots; extremely acid; clear wavy boundary.
C3—64 to 80 inches; very pale brown (10YR 7/4) fine sand; few splotches of gray (10YR 7/1) uncoated sand grains; single grained; loose; few medium distinct yellowish brown (10YR 5/8) iron masses and pore linings; extremely acid.

### Range in Characteristics

*Reaction:* Moderately acid to very strongly acid throughout, except where lime has been added
*Texture:* Sand or fine sand to a depth of 80 inches or more; less than 5 percent silt plus clay in the 10- to 40-inch control section

*A horizon:*
Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2; colors similar to those of the C horizon in eroded areas

*C horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8; in many pedons few or common, fine to coarse splotches or pockets of white or light gray uncoated sand grains that are not indicative of wetness; in some pedons common or many iron accumulations below a depth of 72 inches

## Leon Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately rapid in the spodic horizon
*Parent material:* Sandy marine sediments (fig. 11)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Albany, Bayvi, Boulogne, Chaires, Chipley, Clara, Dorovan, Evergreen, Goldhead, Hurricane, Lutterloh, Lynn Haven, Mandarin, Mascotte, Maurepas, Meadowbrook, Melvina, Moriah, Nutall, Ortega, Osier, Pamlico, Pottsburg, Resota, Ridgewood, Sapelo, Starke, Steinhatchee, Tennille, Tooles, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Sandy, siliceous, thermic Aeric Alaquods

### Typical Pedon

Leon fine sand in Taylor County; USGS Salem topographic quadrangle; about 23 miles south-southeast of Perry, 1,300 feet north and 500 feet west of the southeast corner of sec. 9, T. 7 S., R. 9 E.

Ap—0 to 6 inches; very dark gray (10YR 3/1) fine sand; single grained; loose; extremely acid; clear wavy boundary.
E1—6 to 11 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; extremely acid; gradual wavy boundary.
E2—11 to 25 inches; light gray (10YR 7/2) fine sand; single grained; loose; very strongly acid; clear wavy boundary.
Bh1—25 to 30 inches; black (10YR 2/1) fine sand; massive; friable; sand grains coated with organic matter; extremely acid; clear wavy boundary.
Bh2—30 to 34 inches; dark reddish brown (5YR 3/3) fine sand; massive; friable; sand grains coated with organic matter; extremely acid; clear wavy boundary.
C1—34 to 56 inches; dark yellowish brown (10YR 4/4) fine sand; single grained; loose; extremely acid; gradual wavy boundary.
C2—56 to 80 inches; yellowish brown (10YR 5/4) fine sand; single grained; loose; very strongly acid.

**Range in Characteristics**

*Reaction:* Extremely acid to slightly acid, except where lime has been added
*Texture:* Fine sand or mucky fine sand in the surface layer and fine sand in all other horizons, except in the Bh horizon, which ranges to loamy fine sand

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4. When dry, this horizon has a salt-and-pepper appearance due to mixing of black organic matter and white sand grains.
Thickness—less than 8 inches where value is 3.5 or less

*E horizon:*
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 1 to 4; or neutral in hue and value of 5 to 8
Redoximorphic features—few or common iron masses and pore linings in shades of red, brown, or yellow and none to common vertical black or very gray streaks

*EB horizon (where present):*
Color—hue of 10YR, value of 2 to 4, and chroma of 1

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3; or neutral in hue and value of 2 or 3; none to common vertical or horizontal streaks or pockets of gray or light gray fine sand

*E´ horizon (where present):*
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 3

*Bh´ horizon (where present):*
Color—similar to the Bh horizon
Texture—similar to the Bh horizon

*C horizon:*
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 6

## Lutterloh Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate to slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone (fig. 12)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Boulogne, Chaires, Chiefland, Mandarin, Matmon, Meadowbrook, Melvina, Moriah, Ocilla, Osier, Otela, Ousley, Pottsburg, Ridgewood, Seaboard, Tennille, and Tooles soils
*Taxonomic class:* Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs

**Typical Pedon**

Lutterloh fine sand in an area of Melvina-Moriah-Lutterloh complex in Taylor County; USGS Clara topographic quadrangle; about 35 miles south-southeast of Perry, 2,300 feet north and 1,000 feet west of the southeast corner of sec. 20, T. 8 S., R. 10 E.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) fine sand; weak fine granular structure; very friable; many very fine and fine and common coarse roots; neutral; clear wavy boundary.
E1—8 to 19 inches; yellowish brown (10YR 5/6) fine sand; single grained; loose; common fine, medium, and coarse roots; neutral; gradual wavy boundary.
E2—19 to 36 inches; very pale brown (10YR 7/4) fine sand; single grained; loose; common fine and medium roots; common fine distinct brownish yellow (10YR 6/8) iron masses and pore linings; neutral; clear smooth boundary.
E3—36 to 51 inches; light gray (10YR 7/2) fine sand; single grained; loose; common fine and medium roots; slightly alkaline; clear wavy boundary.
Btg—51 to 64 inches; light brownish gray (2.5Y 6/2) loamy fine sand; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; common fine and medium roots; few medium distinct brownish yellow (10YR 6/6) iron masses and pore linings; slightly alkaline; abrupt wavy boundary.
Cr—64 inches; soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Thickness of the solum:* More than 60 inches
*Depth to bedrock:* More than 60 inches
*Rock fragments:* Up to 3 percent gravel- to boulder-sized fragments of limestone or chert in the solum and on the surface in some pedons
*Reaction:* Extremely acid to moderately acid in the A and E horizons, except where lime has been added, and very strongly acid to slightly alkaline in the Btg horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2

*E horizon:*
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 6. The color is dominantly that of the uncoated sand grains.
Texture—fine sand or loamy fine sand

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 2
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—dominantly very fine sandy loam or fine sandy loam, but ranges from loamy fine sand to sandy clay. The average content of clay in the upper 20 inches of the argillic horizon ranges from 10 to 35 percent.

*2Btg horizon (where present):*
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 2
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—sandy clay loam or sandy loam

*Cr layer:*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Lynn Haven Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderately rapid or moderate in the spodic horizon
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Albany, Boulogne, Chipley, Clara, Dorovan, Evergreen, Hurricane, Leon, Mandarin, Mascotte, Ortega, Osier, Pamlico, Pottsburg, Resota, Ridgewood, Sapelo, and Wesconnett soils
*Taxonomic class:* Sandy, siliceous, thermic Typic Alaquods

### Typical Pedon

Lynn Haven mucky fine sand in an area of Wesconnett and Lynn Haven soils, depressional, in Lafayette County, Florida; USGS Day, SE topographic quadrangle; about 10 miles east of Mayo, 2,000 feet north and 200 feet east of a trail road; 2,300 feet north and 3,200 feet east of the southwest corner of sec. 27, T. 5 S., R. 10 E.

A—0 to 13 inches; very dark brown (10YR 2/2) mucky fine sand; moderate fine granular structure; very friable; many fine, medium, and coarse roots; extremely acid; gradual wavy boundary.
Eg—13 to 19 inches; light brownish gray (10YR 6/2) fine sand; single grained; loose; few fine roots; very strongly acid; clear wavy boundary.
Bh1—19 to 27 inches; black (5YR 2/1) fine sand; massive; friable; few fine, medium, and coarse roots; sand grains coated with organic matter; strongly acid; gradual wavy boundary.
Bh2—27 to 31 inches; dark brown (10YR 3/3) fine sand; massive; friable; few fine and medium roots; sand grains coated with organic matter; extremely acid; gradual wavy boundary.
BE—31 to 34 inches; dark yellowish brown (10YR 4/4) fine sand; single grained; loose; few fine and medium roots; strongly acid; clear wavy boundary.
E´—34 to 52 inches; yellowish brown (10YR 5/4) fine sand; single grained; loose; few fine and medium roots; few medium distinct dark yellowish brown (10YR 3/6) iron accumulations; strongly acid; gradual wavy boundary.
B´h—52 to 80 inches; dark reddish brown (5YR 3/2) fine sand; massive; friable; sand grains coated with organic matter; very strongly acid.

### Range in Characteristics

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been added
*Other features:* Some pedons have a bisequum consisting of an E´ horizon and a B´h horizon.

*Oa horizon (where present):*
Color—hue of 10YR or 7.5YR, value of 2 or 3, and

chroma of 1 to 3; or neutral in hue and value of 2 or 3
Texture—10 to 33 percent fiber unrubbed and less than 10 percent rubbed

*A horizon:*
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Texture—fine sand or mucky fine sand

*E and E´ horizons:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Redoximorphic features—none to common iron masses and pore linings in shades of brown, yellow, or red

*EB or BE horizon (where present):*
Color—hue of 10YR, value of 2 to 4, and chroma of 1; many uncoated sand grains

*Bh and B´h horizons:*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 4; vertical or horizontal tongues of grayish sand in some pedons
Texture—fine sand or loamy fine sand

*C/B horizon (where present):*
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 or 4
Redoximorphic features—none to common iron masses and pore linings in shades of brown, yellow, or red and none to many splotches and stripped areas in the matrix in shades of gray

*C horizon (where present):*
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 3
Redoximorphic features—none to common iron masses and pore linings in shades of brown, yellow, or red

## Mandarin Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate in the spodic horizon
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands along the gulf coast
*Landform:* Rises and knolls
*Commonly associated soils:* Boulogne, Evergreen, Hurricane, Leon, Lutterloh, Lynn Haven, Mascotte, Meadowbrook, Melvina, Moriah, Ortega, Osier, Ousley, Pamlico, Pottsburg, Ortega, Resota, Ridgewood, Sapelo, Tennille, Tooles, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Sandy, siliceous, thermic Oxyaquic Alorthods

### Typical Pedon

Mandarin fine sand in an area of Melvina-Mandarin complex, 0 to 3 percent slopes, in Taylor County; USGS Warrior Swamp topographic quadrangle; about 12 miles south of Perry, 200 feet south and 1,600 feet west of the northeast corner of sec. 11, T. 6 S., R. 7 E.

A—0 to 7 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; very friable; few fine and coarse roots; very strongly acid; gradual wavy boundary.
E1—7 to 15 inches; gray (10YR 5/1) fine sand; single grained; loose; many fine, medium, and coarse roots; very strongly acid; gradual smooth boundary.
E2—15 to 26 inches; light gray (10YR 7/1) fine sand; single grained; loose; many medium and coarse roots; very strongly acid; abrupt irregular boundary.
Bh1—26 to 30 inches; dark reddish brown (5YR 3/2) fine sand; massive; friable; sand grains coated with organic matter; few fine, medium, and coarse roots; very strongly acid; gradual smooth boundary.
Bh2—30 to 34 inches; reddish brown (5YR 4/4) fine sand; massive; friable; sand grains coated with organic matter; few fine, medium, and coarse roots; very strongly acid; gradual smooth boundary.
BC—34 to 44 inches; yellowish brown (10YR 5/4) fine sand; weak fine granular structure; very friable; few fine and medium roots; very strongly acid; gradual smooth boundary.
C—44 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; strongly acid.

### Range in Characteristics

*Reaction:* Extremely acid to moderately acid in the A, E, and Bh horizons, except where lime has been added, and extremely acid to neutral in the BE, BC, E´, and B´h horizons

*A horizon:*
Color—hue of 10YR, value of 2 to 6, and chroma of 1; or neutral in hue and value of 3 to 5

*E horizon:*
Color—hue of 10YR, value of 5 to 8, and chroma of 1 to 8

*Bh horizon:*
Color—hue of 2.5YR to 10YR, value of 2 to 4, and chroma of 1 to 4
Texture—fine sand or loamy fine sand

*BE or BC horizon (where present):*
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 4

*E´ horizon (where present):*
Color—hue of 10YR, value of 5 to 8, and chroma of 1 to 8

*B´h horizon (where present):*
Color—same range as the Bh horizon

*C horizon (where present):*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 to 3

## Mascotte Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate in the spodic horizon and moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Albany, Boulogne, Chipley, Eunola, Leon, Lynn Haven, Ocilla, Osier, Otela, Ousley, Plummer, Ridgewood, Sapelo, Starke, and Surrency soils
*Taxonomic class:* Sandy, siliceous, thermic Ultic Alaquods

### Typical Pedon

Mascotte sand in Jefferson County, Florida; USGS Cody topographic quadrangle; about 13 miles south of Monticello, SW$^1/_4$NE$^1/_4$ sec. 25, R. 4 E., T. 1 S.

A—0 to 4 inches; black (10YR 2/1) sand; weak fine granular structure; very friable; common fine and medium roots; extremely acid; clear smooth boundary.
E—4 to 10 inches; gray (10YR 5/1) sand; single grained; loose; common fine and few medium roots; extremely acid; clear wavy boundary.
Bh1—10 to 13 inches; very dark brown (10YR 2/2) sand; massive; friable; sand grains coated with organic matter; extremely acid; clear wavy boundary.
Bh2—13 to 17 inches; dark brown (7.5YR 3/4) sand; massive; friable; sand grains coated with organic matter; extremely acid; clear wavy boundary.
E´1—17 to 25 inches; light yellowish brown (10YR 6/4) sand; single grained; loose; common fine roots; extremely acid; clear wavy boundary.
E´2—25 to 30 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; few fine roots; few medium distinct dark yellowish brown (10YR 4/4) and few medium prominent yellowish brown (10YR 5/8) iron masses and pore linings; very strongly acid; clear wavy boundary.
Btg1—30 to 35 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; sand grains bridged and coated with clay; few fine roots; common medium prominent yellowish brown (10YR 5/8) iron masses; very strongly acid; gradual wavy boundary.
Btg2—35 to 80 inches; gray (10YR 5/1) sandy clay loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine roots in upper part; common medium prominent yellowish brown (10YR 5/8) iron masses; very strongly acid.

### Range in Characteristics

*Depth to Bh horizon:* 10 to 29 inches
*Depth to Btg horizon:* 24 to 40 inches
*Reaction:* Extremely acid to strongly acid throughout, except where lime has been added and in the C horizon, which is extremely acid to moderately acid (where present)

*A horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1

*E horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 6 or 7

*EB horizon (where present):*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; hue of 2.5Y, value of 3 or 4, and chroma of 2; or neutral in hue and value of 2; few to many uncoated sand grains and small pockets or streaks in shades of gray

*Bh horizon:*
Color—hue of 2.5YR to 10YR, value of 1 to 4, and chroma of 1 to 4; or neutral in hue and value of 2
Texture—fine sand or loamy fine sand

*BE horizon (where present):*
Color—hue of 7.5YR or 10YR and value of 3 or 4
Weakly cemented bodies of Bh material—none to few
Texture—fine sand or loamy fine sand

*E´ horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 4
Redoximorphic features—none to common iron accumulations in shades of brown and mottles in shades of gray

*Btg horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and

chroma of 1 or 2; or neutral in hue and value of 4 to 7
Redoximorphic features—none to common iron depletions in shades of gray and iron masses and pore linings in shades of yellow, brown, and red
Texture—fine sandy loam or sandy clay loam having an average content of clay of 18 to 23 percent but ranging from about 14 to 35 percent

*C horizon (where present):*
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2

## Matmon Series

*Depth class:* Shallow
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Boulogne, Chaires, Lutterloh, Meadowbrook, Melvina, Moriah, Ortega, Ousley, Pottsburg, Resota, Ridgewood, Seaboard, Surrency, Tennille, Tooles, Wekiva, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Loamy, siliceous, active, thermic, shallow Aquic Hapludalfs

### Typical Pedon

Matmon fine sand in an area of Matmon-Wekiva-Rock outcrop complex, occasionally flooded, in Taylor County; USGS Clara topographic quadrangle; about 34 miles south-southeast of Perry, 1,600 feet west and 1,200 feet north of the southeast corner of sec. 17, T. 8 S., R. 10 E.

Ap—0 to 4 inches; very dark grayish brown (10YR 3/2) fine sand; weak medium granular structure; very friable; few fine and medium roots; strongly acid; clear wavy boundary.
E—4 to 11 inches; yellowish brown (10YR 5/6) fine sand; single grained; loose; common fine roots; moderately acid; clear wavy boundary.
Bt—11 to 19 inches; yellowish brown (10YR 5/6) fine sandy loam; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; common fine roots; neutral; abrupt irregular boundary.
Cr—19 inches; very pale brown (10YR 8/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

### Range in Characteristics

*Solum thickness and depth to bedrock:* 10 to 20 inches
*Reaction:* Strongly acid to slightly alkaline in the A and E horizons, except where lime has been added, and slightly acid to slightly alkaline in the Bt horizon
*Rock fragments:* Gravel- to boulder-sized fragments of limestone at the surface or in the solum in many areas

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2

*E horizon:*
Color—hue of 10YR, value of 4 to 6, and chroma of 3 to 6
Texture—fine sand or loamy fine sand

*Bt horizon:*
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6
Redoximorphic features—none to common clay depletions in shades of gray and few to many iron masses and pore linings in shades of brown or yellow
Texture—dominantly fine sandy loam and sandy clay loam, but includes sandy clay in the lower part. The average content of clay in the horizon ranges from 12 to 35 percent. In many pedons the Bt horizon extends into solution holes in the limestone below a depth of 20 inches.

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Maurepas Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Rapid throughout
*Parent material:* Highly decomposed organic matter
*Landscape:* Coastal swamps on the lower Coastal Plain
*Landform:* Depressions and flood plains
*Commonly associated soils:* Bodiford, Chaires, Clara, Eunola, Dorovan, Leon, Meadowbrook, Ridgewood, Tennille, Tooles, Wekiva, and Yellowjacket soils
*Taxonomic class:* Euic, thermic Typic Medisaprists

### Typical Pedon

Maurepas muck in an area of Yellowjacket and Maurepas mucks, depressional, in Taylor County; USGS Lamont topographic quadrangle; about 22 miles northwest of Perry, 700 feet east and 1,000 feet north of the southwest corner of sec. 24, T. 2 S., R. 5 E.

Oa1—0 to 25 inches; dark brown (7.5YR 3/2) muck; about 33 percent fiber unrubbed, 10 percent rubbed; massive; very friable; many fine, medium, and coarse roots; slightly acid; gradual wavy boundary.
Oa2—25 to 60 inches; black (10YR 2/1) muck; about 25 percent fiber unrubbed, less than 5 percent rubbed; massive; very friable; common fine and many medium and coarse roots; neutral.

### Range in Characteristics

*Thickness of the organic matter:* 51 to more than 80 inches
*Reaction:* Moderately acid to moderately alkaline throughout, except in drained and protected pedons, where the surface tier ranges from extremely acid to strongly acid
*Salinity:* None to slight in more than half of the subsurface and bottom tiers

*Oa horizon (surface tier):*
Color—hue of 5YR to 10YR, value of 3 or less, and chroma of 2 or less
Fiber content—2 to about 40 percent rubbed

*Oa horizon (subsurface tier at a depth of 12 to 36 inches):*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 4 or less
Fiber content—60 percent undisturbed and less than 10 percent rubbed

*Oa horizon (bottom tier):*
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 4 or less
Fiber content—typically, less than 10 percent rubbed. Some pedons have thin layers that contain more fibers.
Mineral matter—15 and 45 percent
Type of fibers—dominantly woody, but some pedons have as much as 45 percent herbaceous fiber in the 0- to 51-inch control section. Also, logs (dominantly cypress) and wood fragments in varying states of decomposition are commonly throughout the organic matter.
*Other features:* The organic layers are typically underlain by very fluid gray clay.

The Maurepas soils (euic, hyperthermic, Typic Medisaprists) in Taylor County are taxadjuncts to the series because the soil temperature regime in the county is thermic and the series is hyperthermic. This difference does not significantly affect the use and management of the soils.

## Meadowbrook Series

*Depth class:* Very deep
*Drainage class:* Poorly drained or very poorly drained
*Permeability:* Moderate or moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments in places overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats, flood plains, and depressions
*Commonly associated soils:* Bayvi, Bodiford, Chaires, Clara, Eunola, Goldhead, Leon, Lutterloh, Mandarin, Matmon, Maurepas, Melvina, Osier, Otela, Ousley, Plummer, Pottsburg, Sapelo, Seaboard, Tennille, Tooles, and Wekiva soils
*Taxonomic class:* Loamy, siliceous, subactive, thermic Grossarenic Endoaqualfs

### Typical Pedon

Meadowbrook fine sand in an area of Clara and Meadowbrook soils, depressional, in Taylor County; USGS Steinhatchee topographic quadrangle; about 28 miles south-southeast of Perry, 700 feet east and 50 feet north of the southwest corner of sec. 5, T. 8 S., R. 9 E.

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) fine sand; weak fine granular structure; very friable; many fine and few medium and coarse roots; strongly acid; gradual wavy boundary.
E1—9 to 18 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; few fine, medium, and coarse roots; neutral; gradual wavy boundary.
E2—18 to 31 inches; very pale brown (10YR 7/3) fine

**Figure 9.—Typical profile of Chaires fine sand. The shovel is 42 inches long.**

**Figure 10.—Typical profile of Chiefland fine sand. The shovel is 42 inches long.**

**Figure 11.—Typical profile of Leon fine sand. The shovel is 42 inches long.**

**Figure 12.—Typical profile of Lutterloh fine sand. The shovel is 42 inches long.**

**Figure 13.—Typical profile of Pamlico muck. The shovel is 42 inches long.**

**Figure 14.—Typical profile of Plummer fine sand. The shovel is 42 inches long.**

**Figure 15.—Typical profile of Sapelo fine sand. The shovel is 42 inches long.**

**Figure 16.—Typical profile of Tooles fine sand. The shovel is 42 inches long.**

sand; single grained; loose; few fine and medium roots; common distinct brownish yellow (10YR 6/6) pore linings; neutral; gradual wavy boundary.
E3—31 to 58 inches; light gray (10YR 7/1) fine sand; single grained; loose; few fine and medium roots; neutral; abrupt wavy boundary.
Btg—58 to 80 inches; light brownish gray (2.5Y 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; common medium distinct yellowish brown (10YR 5/8) iron masses; neutral.

**Range in Characteristics**

*Thickness of the solum:* 50 to more than 80 inches
*Depth to bedrock:* More than 60 inches
*Reaction:* Extremely acid to neutral in the A horizon, except where lime has been added; extremely acid to moderately alkaline in the Bw and E horizons; and very strongly acid to moderately alkaline in the Btg horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 5, and chroma of 1 or 2
Thickness—less than 8 inches where value is 3 or less
Texture—fine sand, sand, or their mucky analogs

*Bw horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 3 to 8

*E horizon:*
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 3
Redoximorphic features—few to many pore linings in shades of yellow and brown

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 7
Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of red, yellow, and brown
Texture—fine sandy loam or sandy clay loam and, in some pedons, loamy fine sand in the upper part

*Cr layer (where present):*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (where present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Melvina Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderately rapid in the spodic horizon and moderate to very slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Chaires, Chiefland, Clara, Eunola, Goldhead, Leon, Lutterloh, Mandarin, Matmon, Maurepas, Meadowbrook, Osier, Otela, Ousley, Plummer, Pottsburg, Sapelo, Seaboard, Steinhatchee, Tennille, Tooles, and Wekiva soils
*Taxonomic class:* Sandy, siliceous, thermic Oxyaquic Alorthods

**Typical Pedon**

Melvina fine sand in an area of Melvina-Moriah-Lutterloh complex in Taylor County; USGS Okeenokee Slough topographic quadrangle; about 15 miles south-southwest of Perry, 2,200 feet east and 1,700 feet south of the northwest corner of sec. 11, T. 6 S., R. 7 E.

Ap—0 to 6 inches; gray (10YR 5/1) fine sand; single grained; loose; few fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.
E—6 to 28 inches; white (10YR 8/1) fine sand; single grained; loose; few fine, medium, and coarse roots; slightly acid; clear wavy boundary.
Bh1—28 to 32 inches; dark brown (7.5YR 3/2) fine sand; massive; very friable; sand grains coated with organic matter; few fine and medium roots; moderately acid; gradual wavy boundary.
Bh2—32 to 39 inches; dark reddish brown (5YR 3/3) and brown (10YR 4/3) fine sand; massive; friable; sand grains coated with organic matter; few fine roots; slightly acid; gradual wavy boundary.

EB—39 to 51 inches; pale brown (10YR 6/3) fine sand; single grained; loose; few fine roots; neutral; abrupt clear boundary.
Eg—51 to 53 inches; light gray (10YR 7/1) fine sand; single grained; loose; few fine roots; neutral; abrupt wavy boundary.
Btg1—53 to 67 inches; light gray (10YR 7/1) sandy clay loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine roots; few limestone columns that are 4 to 9 inches in diameter; few fine and medium distinct light olive brown (2.5Y 5/4) pore linings along root channels; neutral; gradual wavy boundary.
Btg2—67 to 80 inches; light gray (5Y 7/1) sandy clay loam; weak medium subangular blocky structure; sticky and plastic; sand grains coated and bridged with clay; few fine roots; few limestone columns that are 6 to 18 inches in diameter; many coarse light yellowish brown (10YR 6/4) iron masses; slightly alkaline.

**Range in Characteristics**

*Thickness of the solum:* 60 to more than 80 inches
*Depth to bedrock:* 60 to more than 80 inches
*Depth to Bh horizon:* 12 to less than 30 inches
*Reaction:* Extremely acid to slightly acid in the A and E horizons, except where lime has been added; very strongly acid to neutral in the Bh horizon; very strongly acid to moderately alkaline in the BE, EB, and Eg horizons; and moderately acid to moderately alkaline in the Btg horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2

*E horizon:*
Color—hue of 10YR, value of 5 to 8, and chroma of 1 or 2

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 3 or 4, and chroma of 2 to 4

*EB or BE horizon (where present):*
Color—hue of 10YR; value of 4 and chroma of 6 or value of 5 or 6 and chroma of 3 to 8

*Eg horizon:*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 or 2

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 or less
Redoximorphic features—none to common iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—fine sandy loam or sandy clay loam

*Cr layer (where present):*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (where present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Moriah Series

*Depth class:* Deep and very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate in the argillic horizon
*Parent material:* Sandy to clayey marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Chaires, Chiefland, Eunola, Leon, Lutterloh, Lynn Haven, Mandarin, Melvina, Nutall, Ousley, Ridgewood, Seaboard, and Tooles soils
*Taxonomic class:* Loamy, siliceous, superactive, thermic Aquic Arenic Hapludalfs

**Typical Pedon**

Moriah fine sand in an area of Melvina-Moriah-Lutterloh complex in Taylor County; USGS Warrior Swamp topographic quadrangle; about 15.5 miles south-southwest of Perry, 1,200 feet west and 1,300 feet south of the northeast corner of sec. 10, T. 6 S., R. 7 E.

Ap—0 to 5 inches; dark gray (10YR 4/1) fine sand; weak medium granular structure; very friable; few medium and coarse roots; very strongly acid; gradual wavy boundary.

E1—5 to 9 inches; light brownish gray (10YR 6/2) fine sand; single grained; loose; few medium and coarse roots; very strongly acid; clear wavy boundary.
E2—9 to 31 inches; white (10YR 8/1) fine sand; single grained; loose; very strongly acid; gradual wavy boundary.
E3—31 to 34 inches; pinkish gray (7.5YR 6/2) fine sand; single grained; loose; few fine and medium roots; strongly acid; abrupt wavy boundary.
Btg1—34 to 52 inches; light gray (2.5Y 7/2) sandy clay loam; strong coarse subangular blocky structure; friable; sand grains coated and bridged with clay; few fine, medium, and coarse roots; neutral; gradual wavy boundary.
Btg2—52 to 57 inches; light gray (5Y 7/1) sandy clay loam; massive; slightly sticky; sand grains coated and bridged with clay; neutral; abrupt wavy boundary.
Cr—57 inches; light gray (5Y 7/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Thickness of the solum:* 40 to 72 inches
*Depth to bedrock:* 40 to 72 inches
*Rock fragments:* In many pedons up to 5 percent gravel- to boulder-sized fragments of limestone or chert in the solum
*Reaction:* Extremely acid or very strongly acid in the A and E horizons, except where lime has been added, and moderately alkaline in the Bt horizon where present

*A or Ap horizon:*
Color—hue of 10YR, value of 3 to 6, and chroma of 1 or 2

*E horizon:*
Color—hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 1 to 8; common white streaks or pockets of clean sand grains
Redoximorphic features—few to many iron accumulations in shades of yellow or brown

*Bt horizon (where present):*
Color—hue of 10YR, value of 5 to 7, and chroma of 1 to 6
Redoximorphic features—none to many iron depletions in shades of gray and iron masses in shades of brown, yellow, or red
Texture—fine sandy loam or sandy clay loam

*Btg horizon:*
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2
Redoximorphic features—iron depletions in shades of gray and iron masses in shades of brown, yellow, or red
Texture—fine sandy loam to clay

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Nutall Series

*Depth class:* Moderately deep
*Drainage class:* Poorly drained
*Permeability:* Slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats and depressions
*Commonly associated soils:* Bayvi, Chaires, Goldhead, Hurricane, Leon, Moriah, Surrency, and Tooles soils
*Taxonomic class:* Fine-loamy, siliceous, superactive, thermic Mollic Albaqualfs

**Typical Pedon**

Nutall fine sand in an area of Nutall-Tooles complex in Jefferson County, Florida; USGS St. Marks, NE topographic quadrangle; about 24 miles south-southwest of Monticello, 1.25 miles east of State Road 59 and 2.5 miles north of U.S. Highway 98, SW$^1/_4$NE $^1/_4$NW$^1/_4$ sec. 15, T. 3 S., R. 3 E.

Ap—0 to 4 inches; black (5Y 2/1) fine sand; weak fine granular structure; very friable; many fine, medium, and coarse roots; strongly acid; clear wavy boundary.

A/E—4 to 9 inches; mixed very dark gray (10YR 3/1) and light gray (10YR 6/1) fine sand; single grained; loose; many medium and coarse roots; slightly acid; clear smooth boundary.
E1—9 to 13 inches; light gray (10YR 7/1) fine sand; single grained; loose; common medium roots; common medium distinct brown (10YR 5/3) iron masses and pore linings; neutral; clear wavy boundary.
E2—13 to 17 inches; brown (10YR 5/3) fine sand; single grained; loose; few medium roots; many medium distinct light gray (10YR 6/1) splotches and stripped areas in the matrix; neutral; abrupt irregular boundary.
Btg—17 to 30 inches; light greenish gray (5GY 7/1) sandy clay loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay; many fine prominent yellowish red (5YR 5/8) iron masses; slightly alkaline; abrupt irregular boundary.
Cr—30 inches; light gray (10YR 7/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Solum thickness and depth to bedrock:* 21 to 40 inches
*Reaction:* Very strongly acid or strongly acid in the A and A/E horizons, except where lime has been added; strongly acid to neutral in the E horizon; and neutral to moderately alkaline in the Btg horizon

*A or Ap horizon:*
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2

*A/E horizon:*
Color—mixed pattern

*E horizon:*
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2 in the upper part; hue of 10YR, value of 5 or 6, and chroma of 2 or 3 in the lower part; chroma of 2 or less in more than 60 percent of the mass between a depth of 4 and 30 inches
Redoximorphic features—few or common iron masses and pore linings in shades of red, yellow, and brown in most pedons and splotches and stripped areas in the matrix in shades of gray
Texture—sand or fine sand

*Btg horizon:*
Color—hue of 10YR to 5GY, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
Redoximorphic features—common or many iron depletions in shades of gray and iron masses in shades of yellow and brown
Texture—fine sandy loam, sandy loam, or sandy clay loam. In some pedons the lower part of the horizon has a thin layer of sandy clay for which the weighted average content of clay does not exceed 35 percent.

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Ocilla Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Moderate slow or moderate in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Boulogne, Eunola, Lutterloh, Matmon, Nutall, Ortega, Osier, Ousley, Pamlico, Ridgewood, Sapelo, Seaboard, Starke, Steinhatchee, and Tooles soils
*Taxonomic class:* Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

**Typical Pedon**

Ocilla sand in Taylor County; USGS Boyd topographic quadrangle; about 6 miles northeast of Perry, 2,500 feet east and 800 feet north of the southwest corner of sec. 7, T. 4 S., R. 8 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) sand; weak medium granular structure; very friable; few fine, medium, and coarse roots; strongly acid; gradual wavy boundary.
E—6 to 23 inches; brown (10YR 5/3) sand; few medium distinct dark grayish brown (10YR 4/2) and light gray (10YR 7/2) splotches; single grained; loose; few fine, medium, and coarse roots; less than 5 percent ironstone concretions, by volume; strongly acid; gradual wavy boundary.
Bt—23 to 28 inches; brownish yellow (10YR 6/6) fine sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine, medium, and coarse roots; few medium distinct reddish yellow (7.5YR 6/6) iron masses and pore linings; very strongly acid; gradual wavy boundary.
Btg1—28 to 47 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few fine and medium roots; common coarse prominent reddish yellow (7.5YR 6/6) iron masses; very strongly acid; gradual wavy boundary.
Btg2—47 to 68 inches; light gray (10YR 7/1) fine sandy loam; weak coarse subangular blocky structure; friable; few fine and medium roots; common coarse prominent reddish yellow (7.5YR 6/6) iron masses; very strongly acid; gradual smooth boundary.
Cg—68 to 80 inches; light gray (10YR 7/1) sandy loam; weak coarse granular structure; very friable; common coarse prominent reddish yellow (7.5YR 6/6) iron masses; very strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 60 to more than 80 inches
*Reaction:* Strongly acid or very strongly acid, except where lime has been added

*A or Ap horizon:*
- Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2; or neutral in hue and value of 3 to 5.
- Thickness—less than 7 inches where value is 3.5 or less
- Ironstone pebbles—less than 5 percent, by volume

*E horizon:*
- Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 4
- Redoximorphic features—none to many iron masses and pore linings in shades of brown or olive below a depth of 12 inches
- Ironstone pebbles—less than 5 percent
- Texture—sand, fine sand, loamy fine sand, or loamy sand

*BE horizon (where present):*
- Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
- Redoximorphic features—few to many iron masses and pore linings in shades of yellow, brown, or red
- Ironstone pebbles—less than 5 percent
- Texture—loamy fine sand or loamy sand

*Bt horizon:*
- Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 3 to 8; or multicolored in shades of gray, yellow, brown, and red
- Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
- Texture—dominantly sandy clay loam, but includes sandy loam, fine sandy loam, and sandy clay and has pockets of sandy loam or fine sandy loam in some pedons. The weighted average content of clay in the upper 20 inches of the argillic horizon ranges from 15 to 35 percent.
- Plinthite—0 to about 3 percent, by volume

*Btg horizon:*
- Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 1 or 2
- Redoximorphic features—few to many iron masses in shades of yellow, brown, and red
- Texture—dominantly sandy clay loam, but includes sandy loam, fine sandy loam, and sandy clay and has pockets of sandy loam or fine sandy loam in some subhorizons
- Plinthite—0 to about 3 percent, by volume

*BCg horizon (where present):*
- Color—similar to the Btg horizon
- Texture—similar to the Btg horizon

*Cg horizon (where present):*
- Color—same as the Btg horizon
- Texture—sandy loam, sandy clay loam, sandy clay, or clay

## Ortega Series

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Boulogne,

Chipley, Clara, Hurricane, Kershaw, Leon, Lynn Haven, Mandarin, Matmon, Osier, Ousley, Pottsburg, Resota, Ridgewood, Sapelo, and Wesconnett soils

*Taxonomic class:* Thermic, uncoated Typic Quartzipsamments

**Typical Pedon**

Ortega fine sand, 0 to 5 percent slopes, in Taylor County; USGS Jena topographic quadrangle; about 38 miles south-southeast of Perry, 2,000 feet east and 2,200 feet south of the northwest corner of sec. 7, T. 9 S., R. 10 E.

Ap—0 to 5 inches; gray (10YR 5/1) fine sand; single grained; loose; many fine to coarse roots; very strongly acid; clear wavy boundary.

C1—5 to 20 inches; very pale brown (10YR 7/4) fine sand; single grained; loose; many fine to coarse roots; very strongly acid; gradual wavy boundary.

C2—20 to 42 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; common medium and coarse roots; very strongly acid; gradual wavy boundary.

C3—42 to 61 inches; light yellowish brown (10YR 6/4) fine sand; single grained; loose; common fine and medium faint brownish yellow (10YR 6/6) iron masses and pore linings; very strongly acid; clear wavy boundary.

C4—61 to 80 inches; white (10YR 8/1) fine sand; single grained; loose; common fine and medium prominent yellowish red (5YR 5/8) iron masses and pore linings; very strongly acid.

**Range in Characteristics**

*Reaction:* Extremely acid to slightly acid throughout, except where lime has been added

*A or Ap horizon:*

Color—hue of 10YR, value of 3 to 6, and chroma of 1 or 2

*Upper part of the C horizon:*

Color—hue of 10YR, value of 5 to 7, and chroma of 3 to 8; in some pedons few or common, fine to coarse splotches or pockets of white or light gray uncoated sand grains that are not indicative of wetness

Redoximorphic features—iron masses and pore linings in shades of reddish yellow, yellowish red, or strong brown beginning at a depth of 42 inches

*Lower part of the C horizon:*

Color—hue of 10YR, value of 5 to 7, and chroma of 6 to 8; hue of 10YR, value 7 or 8, and chroma of 1 or 2; hue of 2.5Y, value of 7, and chroma of 4; or, below a depth of about 60 inches in some pedons, hue of 10YR, value of 6 to 8, and chroma of 1 or 2 with or without redoximorphic features

Redoximorphic features—few to many iron masses and pore linings in shades of brown, yellow, or red

Black heavy-mineral particles—few or common

## Osier Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lower Coastal Plains
*Landform:* Flats and flatwoods
*Commonly associated soils:* Bayvi, Chaires, Chipley, Clara, Goldhead, Hurricane, Leon, Lutterloh, Lynn Haven, Mandarin, Mascotte, Meadowbrook, Melvina, Ocilla, Ortega, Otela, Ousley, Pottsburg, Ridgewood, Sapelo, Starke, Tooles, Wesconnett, and Yellowjacket soils
*Slope:* 0 to 2 percent
*Taxonomic class:* Siliceous, thermic Typic Psammaquents

**Typical Pedon**

Osier fine sand in an area of Clara and Osier fine sands in Taylor County; USGS Salem topographic quadrangle; about 30 miles south-southeast of Perry, 2,400 feet north and 200 feet west of the southeast corner of sec. 9, T. 7 S., R. 9 E.

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) fine sand; single grained; loose; many fine to coarse roots; very strongly acid; clear wavy boundary.

C1—5 to 18 inches; brown (10YR 4/3) fine sand; single grained; loose; many fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.

C2—18 to 25 inches; pale brown (10YR 6/3) fine sand; single grained; loose; many fine and medium roots; common fine and medium distinct yellowish brown (10YR 5/6) iron masses and pore linings; very strongly acid; gradual wavy boundary.

C3—25 to 50 inches; light brownish gray (10YR 6/2) fine sand; common fine and medium distinct brownish yellow (10YR 6/6) and prominent yellowish red (5YR 5/8) iron masses and pore linings; very strongly acid; gradual wavy boundary.

C4—50 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; strongly acid.

**Range in Characteristics**

*Reaction:* Extremely acid to moderately acid, except where lime has been added
*Silt plus clay content in the 10- to 40-inch zone:* 5 to 15 percent

*A or Ap horizon:*
Color—hue of 10YR or 2.5 Y, value of 2 to 5, and chroma of 1 or 2.
Thickness—less than 10 inches where value is 2 or 3
Texture—fine sandy loam, loamy fine sand, loamy sand, fine sand, or sand

*C horizon:*
Color—hue of 7.5YR to 5Y or 5GY, value of 3 to 8, and chroma of 1 or 2
Redoximorphic features—none to common iron masses and pore linings in shades of brown and yellow
Texture in the upper part—loamy fine sand, loamy sand, fine sand, or sand
Texture in the lower part—fine sand, sand, or coarse sand. Most pedons have thin strata of material that ranges from sand to sandy loam.

*Ab horizon (where present):*
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2
Texture—fine sand, loamy fine sand, or loamy sand

## Otela Series

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Permeability:* Moderately slow or slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Chiefland, Hurricane, Kershaw, Lutterloh, Mascotte, Meadowbrook, Ocilla, Ortega, Osier, Ousley, Pamlico, Ridgewood, Sapelo, Starke, Surrency, Wekiva, and Yellowjacket soils
*Taxonomic class:* Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs

**Typical Pedon**

Otela fine sand in an area of Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes, in Taylor County; USGS Boyd topographic quadrangle; about 3 miles northeast of Perry, 1,300 feet east and 700 feet north of the southwest corner of sec. 7, T. 4 S., R. 8 E.

Ap—0 to 7 inches; dark brown (10YR 3/2) fine sand; weak medium granular structure; very friable; few fine, medium, and coarse roots; moderately acid; abrupt wavy boundary.
E1—7 to 28 inches; brownish yellow (10YR 6/6) fine sand; few coarse pockets of dark grayish brown (10YR 4/2) splotches; single grained; loose; few fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.
E2—28 to 47 inches; very pale brown (10YR 7/4) fine sand; common coarse distinct light gray (10YR 7/1) pockets of clean sand grains; single grained; loose; less than 5 percent ironstone concretions, by volume; few fine, medium, and coarse roots; few fine prominent yellow (10YR 7/8) iron masses and pore linings; strongly acid; abrupt wavy boundary.
EB—47 to 54 inches; yellowish brown (10YR 5/6) loamy fine sand; moderate medium subangular blocky structure; friable; less than 5 percent ironstone concretions, by volume; strongly acid; gradual smooth boundary.
Bt—54 to 63 inches; yellowish brown (10YR 5/6) fine sandy loam; moderate medium subangular blocky structure; friable; less than 5 percent ironstone concretions; common coarse distinct gray (10YR 6/1) iron depletions; strongly acid; gradual smooth boundary.
Btg—63 to 80 inches; gray (N 6/0) sandy clay loam; massive; slightly sticky; sand grains coated and bridged with clay; common coarse prominent strong brown (7.5YR 5/6) iron masses; strongly acid.

**Range in Characteristics**

*Solum thickness and depth to bedrock:* 60 to more than 80 inches
*Reaction:* Very strongly acid to neutral in the A and E horizons, except where lime has been added; extremely acid to slightly alkaline in the upper Bt horizons; and extremely acid to moderately alkaline in the lower Bt horizons

*A or Ap horizon:*
Color—hue of 10YR, value of 3 to 6, and chroma of 1 to 3

*E horizon:*
Color—hue of 10YR; value of 5 to 7 and chroma of 2 to 8 or value of 8 and chroma of 1 to 3
Redoximorphic features—none to common iron masses and pore linings in shades of red, brown, or yellow and none to many pockets or splotches of white uncoated sand grains that

are not indicative of wetness but rather are the color of the sand grains
Lamella—thin, having a texture of loamy fine sand or fine sandy loam
Gravel-sized ironstone nodules (where present)—less than about 5 percent, by volume, in the lower part

*EB horizon (where present):*
Color and other properties are similar to those of the E horizon.

*Bt horizon:*
Color—hue of 10YR, value of 5 to 8, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam. The weighted average content of clay is 15 to 35 percent in the upper 20 inches.
Gravel-sized ironstone nodules (where present)—less than about 5 percent, by volume

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Redoximorphic features—none to common iron depletions in shades of gray and iron masses and pore linings in shades of yellow, red, or brown
Texture—sandy loam, fine sandy loam, sandy clay loam, or sandy clay

*2Btg horizon (if present):*
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2
Redoximorphic features—none to common iron depletions in shades of gray and iron masses and pore linings in shades of yellow, red, or brown
Texture—sandy clay or clay
Gravel- or cobble-sized nodules of ironstone (where present)—about 5 percent, by volume

*BC horizon (where present below a depth of 60 inches):*
Color—hue of 10YR; value of 5 or 6 and chroma of 6 or value of 8 and chroma of 3 to 6
Redoximorphic features—none to common iron depletions in shades of gray and iron masses in shades of yellow, red, or brown
Texture—fine sand or loamy fine sand

*2Cg horizon (where present):*
Color—hue of 10YR; value of 5 or 6 and chroma of 6 or value of 8 and chroma of 3 to 6
Texture—sandy clay or clay
Gravel- or cobble-sized nodules of ironstone (where present)—about 5 percent, by volume

## Ousley Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Chipley, Hurricane, Kershaw, Lutterloh, Mandarin, Mascotte, Matmon, Meadowbrook, Moriah, Ocilla, Osier, Otela, Ridgewood, Sapelo, Seaboard, Starke, Tennille, Wekiva, and Wesconnett soils
*Taxonomic class:* Thermic, uncoated Aquic Quartzipsamments

### Typical Pedon

Ousley fine sand in an area of Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded, in Taylor County; USGS Warrior Swamp topographic quadrangle; about 14.5 miles south of Perry, 500 feet south and 1,500 feet east of the northwest corner of sec. 23, T. 6 S., R. 7 E.

Ap—0 to 4 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; few fine and medium roots; few fine distinct brown (10YR 5/3) iron masses; strongly acid; abrupt wavy boundary.
C1—4 to 45 inches; very pale brown (10YR 7/3) fine sand; single grained; loose; common fine roots; common medium distinct grayish brown (2.5Y 5/2) stripped areas in the matrix; strongly acid; clear wavy boundary.
C2—45 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; common medium faint very pale brown (10YR 7/3) iron masses; strongly acid.

### Range in Characteristics

*Thickness of the solum:* 80 inches or more
*Reaction:* Very strongly acid to moderately acid, except where lime has been added
*Silt plus clay content:* 2 to 5 percent

*A or Ap horizon:*
Color—hue of 10YR or 2.5Y, value of 2 to 7, and chroma of 1 or 2
Texture—sand, fine sand, or loamy fine sand
Thickness—less than 10 inches where texture is loamy fine sand; less than 8 inches where value is 2 or 3

*Upper part of the C horizon:*
Color to a depth of 40 inches—hue of 10YR to 5Y, value of 4 to 8, and chroma of 3 to 6

Redoximorphic features—none to common iron masses and pore linings in shades of red, brown, or yellow and none to common splotches and stripped areas in the matrix with chroma of 2 or less
Texture—sand, fine sand, or coarse sand

*Lower part of the C horizon:*
Color below a depth of 40 inches—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 4
Redoximorphic features—few or common iron masses and pore linings in shades of red, brown, or yellow
Texture—fine sand, sand, or coarse sand

## Pamlico Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderate or moderately rapid in the organic matter
*Parent material:* Highly decomposed organic matter underlain by sandy marine sediments (fig. 13)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Croatan, Dorovan, Evergreen, Hurricane, Leon, Lynn Haven, Mandarin, Ridgewood, Sapelo, Starke, Surrency, and Yellowjacket soils
*Taxonomic class:* Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Medisaprists

### Typical Pedon

Pamlico muck in an area of Dorovan and Pamlico mucks, depressional, in Taylor County; USGS Perry topographic quadrangle; about 5 miles east of Perry, 1,100 feet north and 700 feet east of the southwest corner of sec. 27, T. 4 S., R. 8 E.

Oe—0 to 3 inches; dark brown (7.5YR 3/2) muck; 75 percent fiber unrubbed, less than 15 percent rubbed; massive; very friable; common fine and medium roots; very strongly acid; gradual smooth boundary.
Oa1—3 to 9 inches; black (7.5YR 2.5/1) muck; 10 percent fiber unrubbed, less than 5 percent rubbed; massive; friable; few fine to coarse roots; very strongly acid; gradual smooth boundary.
Oa2—9 to 22 inches; alternating bands of black (7.5YR 2.5/1) and dark reddish brown (5YR 3/3) muck; less than 5 percent fiber rubbed; massive; friable; few fine, medium, and coarse roots; extremely acid; abrupt wavy boundary.
Cg1—22 to 25 inches; black (10YR 2/1) mucky fine sand; massive; friable; few fine and medium roots; extremely acid; gradual wavy boundary.
Cg2—25 to 65 inches; brown (10YR 5/3) fine sand; single grained; loose; extremely acid; gradual wavy boundary.

### Range in Characteristics

*Thickness of the organic matter:* 16 to 51 inches
*Reaction:* Extremely acid (pH less than 4.5 in 0.01 M calcium chloride) in the organic layers and extremely acid to strongly acid in the underlying mineral layers

*Oe or Oi horizon:*
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3

*Oa horizon:*
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*2Cg horizon:*
Color—hue of 10YR, value of 2 to 6, and chroma of 2 or less; or neutral in hue and value of 2 to 6
Texture—the upper 12 inches of the Cg horizon or of the part of the Cg horizon that is within a depth of 51 inches, whichever is thicker, is sandy by weighted average—typically sand, fine sand, loamy sand, or loamy fine sand; in some pedons, it has thin subhorizons that are loamy—typically sandy loam, fine sandy loam, sandy clay loam, or their mucky analogs. Below a depth of 51 inches, the texture is variable, typically ranging from sand to sandy clay loam.

## Plummer Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate or moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments (fig. 14)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats
*Commonly associated soils:* Albany, Clara, Croatan, Eunola, Goldhead, Mascotte, Matmon, Meadowbrook, Ocilla, Ridgewood, Sapelo, Starke, Steinhatchee, Surrency, Tennille, and Wekiva soils
*Taxonomic class:* Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

**Typical Pedon**

Plummer fine sand, 0 to 2 percent slopes, in Lafayette County, Florida; USGS Mayo SE topographic quadrangle; about 4 miles southeast of Mayo, 1,200 feet north and 600 feet west of the southeast corner of sec. 28, T. 5 S., R. 12 E.

A—0 to 7 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; few fine and very fine roots; very strongly acid; clear wavy boundary.

Eg1—7 to 14 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; very strongly acid; gradual wavy boundary.

Eg2—14 to 22 inches; gray (10YR 6/1) fine sand; single grained; loose; very dark grayish brown (10YR 3/2) root stains; few charcoal fragments; strongly acid; gradual wavy boundary.

Eg3—22 to 55 inches; light gray (10YR 7/1) fine sand; single grained; loose; common medium distinct yellowish brown (10YR 5/6 and 5/8) iron masses and pore linings; strongly acid; abrupt wavy boundary.

Btg—55 to 80 inches; gray (10YR 6/1) fine sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; many medium prominent yellowish brown (10YR 5/6 and 5/8) iron masses; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 72 to more than 100 inches

*Reaction:* Extremely acid to strongly acid, except where lime has been added

*O horizon (where present):*
- Thickness—less than 8 inches
- Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
- Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*A horizon:*
- Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4
- Thickness—less than 8 inches where value is 2 or 3

*Eg horizon:*
- Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 or 2; or neutral in hue and value of 5 to 8
- Redoximorphic features—few or common iron masses and pore linings in shades of brown and yellow in some pedons
- Texture—fine sand or loamy fine sand

*BEg horizon (where present):*
- Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
- Redoximorphic features—none to common iron masses and pore linings in shades of brown and yellow
- Texture—loamy sand or loamy fine sand

*Btg horizon:*
- Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
- Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
- Texture—sandy loam, fine sandy loam, or sandy clay loam and, in some pedons, pockets of loamy sand and sandy clay having a content of clay ranging from 13 to 35 percent

## Pottsburg Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate in the spodic horizon
*Parent material:* Loamy and sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Boulogne, Dorovan, Evergreen, Hurricane, Leon, Lutterloh, Lynn Haven, Mandarin, Matmon, Meadowbrook, Melvina, Ortega, Osier, Ridgewood, Sapelo, Seaboard, Starke, Steinhatchee, and Wesconnett soils
*Taxonomic class:* Sandy, siliceous, thermic Grossarenic Alaquods

**Typical Pedon**

Pottsburg fine sand in Taylor County; USGS Greenville SE topographic quadrangle; about 9 miles north of Perry, 2,200 feet north and 600 feet east of the southwest corner of sec. 20, T. 3 S., R. 8 E.

Ap—0 to 6 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; loose; very strongly acid; clear wavy boundary.

E1—6 to 15 inches; pale brown (10YR 6/3) fine sand; single grained; loose; strongly acid; gradual wavy boundary.

E2—15 to 52 inches; white (2.5Y 8/2) fine sand; single grained; loose; moderately acid; clear wavy boundary.

Bh—52 to 80 inches; dark reddish brown (5YR 2/2) fine sand; massive; friable; sand grains coated with organic matter; moderately acid.

**Range in Characteristics**

*Reaction:* Extremely acid to slightly acid in the A and E horizons, except where lime has been added, and extremely acid to moderately acid in the Bh horizon

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 5, and chroma of 1 or 2; or neutral in hue and value of 2 to 5

*Upper part of the E horizon:*
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 3

*Lower part of the E horizon:*
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2
Redoximorphic features—none to common iron masses and pore linings in shades of brown and yellow

*EB, BE, or B/E horizon (where present):*
Texture—sand, fine sand, loamy sand, or loamy fine sand; none to many discontinuous lenses or spodic bodies that are thinly to moderately coated with colloidal organic matter

*Bh horizon:*
Color—hue of 5YR, value of 2 or 3, and chroma of 1 to 4; hue of 7.5YR, value of 3, and chroma of 2; hue of 10YR, value 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2
Texture—sand, fine sand, loamy sand, or loamy fine sand

## Resota Series

*Depth class:* Very deep
*Drainage class:* Moderately well drained
*Permeability:* Very rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Boulogne, Chipley, Evergreen, Hurricane, Leon, Lynn Haven, Mandarin, Melvina, Nutall, Ortega, Osier, Otela, Ousley, Pamlico, Plummer, Pottsburg, Ridgewood, Sapelo, Seaboard, and Wesconnett soils
*Taxonomic class:* Thermic, uncoated Spodic Quartzipsamments

**Typical Pedon**

Resota sand, 0 to 5 percent slopes, in Dixie County, Florida; USGS Shired Island topographic quadrangle; about 15 miles south of Cross City, 150 feet south and 1,800 feet west of the northeast corner of sec. 22, T. 12 S., R. 11 E.

A—0 to 3 inches; gray (10YR 5/1) sand; single grained; weak fine granular structure; very friable; many fine and very fine and many medium roots; very strongly acid; clear smooth boundary.
E—3 to 13 inches; white (10YR 8/1) sand; few fine and medium distinct dark gray (10YR 4/1) and prominent very dark gray (10YR 3/1) streaks and splotches; single grained; loose; common fine and very fine and many medium roots; strongly acid; abrupt irregular boundary.
Bw1—13 to 19 inches; strong brown (7.5YR 5/8) sand; common medium prominent dark brown (7.5YR 3/4) organically coated pockets and lenses around root channels and vertical intrusions of material from the E horizon; single grained; loose; common fine and very fine and many medium roots; very strongly acid; clear wavy boundary.
Bw2—19 to 37 inches; brownish yellow (10YR 6/6) sand; few fine prominent very dark gray (10YR 3/1) depletions surrounding roots; single grained; loose; common fine and medium roots; very strongly acid; gradual wavy boundary.
Bw3—37 to 55 inches; very pale brown (10YR 7/4) sand; common fine faint very pale brown (10YR 7/3) splotches; single grained; loose; few fine and very fine roots; common fine distinct brownish yellow (10YR 6/6) iron masses and pore linings; strongly acid; gradual wavy boundary.
C—55 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; few fine and very fine roots; many medium and coarse prominent brownish yellow (10YR 6/6) iron masses and pore linings; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 40 or more inches
*Texture:* Sand or fine sand throughout
*Reaction:* Extremely acid to slightly acid throughout, except where lime has been added

*A horizon:*
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2

*E horizon:*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 or 2; or neutral in hue and value of 6 or 8

*Bw horizon:*
Color—hue of 10YR or 7.5YR, value of 5 to 7, and chroma of 4 to 8; in some pedons discontinuous Bh bodies at the base of the E horizon and surrounding tongues of E material

Redoximorphic features—few or common iron masses and pore linings in shades of yellow and red in lower part

*C horizon:*
Color—hue of 10YR, value of 6 to 8, and chroma of 1 to 4; few or common splotches in shades of gray
Redoximorphic features—few or common iron masses and pore linings in shades of yellow, brown, or red

## Ridgewood Series

*Depth class:* Very deep
*Drainage class:* Somewhat poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Albany, Boulogne, Chaires, Dorovan, Evergreen, Goldhead, Hurricane, Kershaw, Leon, Lutterloh, Lynn Haven, Mandarin, Mascotte, Maurepas, Melvina, Moriah, Ocilla, Ortega, Osier, Otela, Ousley, Plummer, Pottsburg, Sapelo, Seaboard, and Wesconnett soils
*Taxonomic class:* Thermic, uncoated Aquic Quartzipsamments

**Typical Pedon**

Ridgewood fine sand, 0 to 3 percent slopes, in Taylor County; USGS Steinhatchee topographic quadrangle; about 34 miles south of Perry, 3,000 feet south and 1,200 feet west of the northeast corner of sec. 3, T. 7 S., R. 9 E.

Ap—0 to 9 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; many fine, medium, and coarse roots; strongly acid; clear wavy boundary.
C1—9 to 25 inches; yellowish brown (10YR 5/4) fine sand; single grained; loose; common fine, medium, and coarse roots; very strongly acid; gradual wavy boundary.
C2—25 to 48 inches; yellowish brown (10YR 5/4) fine sand; single grained; loose; common fine and medium roots; common fine and medium distinct yellowish brown (10YR 5/8) iron masses and pore linings; very strongly acid; gradual wavy boundary.
C3—48 to 69 inches; light yellowish brown (10YR 6/4) fine sand; common medium and coarse light gray (10YR 7/2) splotches; single grained; loose; common fine prominent strong brown (7.5YR 5/8) iron masses and pore linings; very strongly acid; gradual wavy boundary.
C4—69 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; common medium and coarse district yellowish brown (10YR 5/6) iron masses and pore linings; very strongly acid.

**Range in Characteristics**

*Reaction:* Very strongly acid to neutral, except where lime has been added
*Texture:* Sand or fine sand

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 5, and chroma of 1 or 2; or neutral in hue and value of 2 to 5

*C horizon:*
Color—hue of 10YR to 5Y; value of 5 to 8 and chroma of 2 to 8 or value of 4 and chroma of 3. Chroma of 2 generally begins above a depth of 42 inches, is due to uncoated sand grains, and is not indicative of wetness.
Redoximorphic features—common or many iron masses and pore linings in shades of red, yellow, and brown within a depth of 24 to 42 inches

## Sapelo Series

*Depth class:* Very deep
*Drainage class:* Poorly drained
*Permeability:* Moderate
*Parent material:* Sandy and loamy marine sediments (fig. 15)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Albany, Boulogne, Chipley, Dorovan, Eunola, Evergreen, Goldhead, Hurricane, Leon, Lynn Haven, Mandarin, Matmon, Meadowbrook, Ocilla, Ortega, Osier, Otela, Ousley, Pamlico, Plummer, Pottsburg, Ridgewood, Starke, and Surrency soils
*Taxonomic class:* Sandy, siliceous, thermic Ultic Alaquods

**Typical Pedon**

Sapelo fine sand in an area of Sapelo-Chaires, depressional complex, in Lafayette County, Florida; USGS Mayo topographic quadrangle; about 4.5 miles southeast of Mayo, 2,000 feet north of County Road 355A and 100 feet east of a trail road; about 2,700 feet north and 700 feet east of the southwest corner of sec. 31, T. 5 S., R. 12 E.

A—0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; many fine roots; extremely acid; clear wavy boundary.

E1—6 to 12 inches; gray (10YR 5/1) fine sand; common distinct very dark gray (10YR 3/1) streaks; single grained; loose; common fine and common medium roots; extremely acid; clear wavy boundary.
E2—12 to 28 inches; light gray (10YR 7/1) fine sand; common medium distinct very dark gray (10YR 3/1) streaks; single grained; loose; common medium roots; strongly acid; abrupt wavy boundary.
Bh1—28 to 34 inches; black (5YR 2/1) fine sand; massive; friable; sand grains coated with organic matter; few clear sand grains; very strongly acid; clear wavy boundary.
Bh2—34 to 45 inches; dark reddish brown (5YR 3/4) fine sand; massive; friable; sand grains coated with organic matter; common medium distinct very dark grayish brown (10YR 3/2) streaks along root channels; few fine roots; strongly acid; gradual wavy boundary.
E´—45 to 60 inches; light gray (10YR 7/2) fine sand; common medium distinct dark yellowish brown (10YR 4/4) root stains; single grained; loose; few fine roots; strongly acid; gradual wavy boundary.
Btg1—60 to 73 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; many coarse prominent strong brown (7.5YR 5/6 and 5/8) and common medium prominent red (2.5YR 4/6 and 4/8) iron masses; strongly acid; gradual wavy boundary.
Btg2—73 to 80 inches; light olive gray (5Y 6/2) fine sandy loam; weak medium subangular blocky structure; slightly sticky; sand grains coated and bridged with clay; common medium distinct yellowish brown (10YR 5/6) iron masses; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 70 to 90 inches
*Reaction:* Extremely acid to strongly acid, except where lime has been added

*A horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1; or neutral in hue and value of 2 to 4

*E horizon:*
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2; or neutral in hue and value of 5 to 8; none to common vertical streaks of dark gray
Texture—sand or fine sand

*Bh horizon:*
Color—hue of 2.5YR to 10YR, value of 2 to 4, and chroma of 2 to 4; none to common bodies in shades of brown
Texture—sand, fine sand, or loamy fine sand

*BE horizon (where present):*
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Pockets of Bh material—none to common
Texture—sand or fine sand

*E´ horizon:*
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 4
Pockets of Bh material—none to common
Redoximorphic features—none to common iron masses and pore linings in shades of red, brown, and yellow
Texture—sand or fine sand

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 or 2; or multicolored without a dominant color
Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, clay loam, or sandy clay loam and, in some pedons, lenses and pockets of sand and clay

## Seaboard Series

*Depth class:* Very shallow and shallow
*Drainage class:* Moderately well drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine or eolian sediments overlying limestone bedrock
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises and knolls
*Commonly associated soils:* Chaires, Goldhead, Hurricane, Lutterloh, Mascotte, Meadowbrook, Melvina, Moriah, Ocilla, Ortega, Ousley, Pamlico, Ridgewood, Surrency, Tennille, and Tooles soils
*Taxonomic class:* Thermic, uncoated Lithic Quartzipsamments

**Typical Pedon**

Seaboard fine sand in an area of Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes, in Taylor County; USGS Clara topographic quadrangle; about 37 miles south-southeast of Perry, 1,600 feet east and 1,300 feet south of the northwest corner of sec. 32, T. 8 S., R. 10 E.

A—0 to 3 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; many fine and medium roots; strongly acid; abrupt wavy boundary.
C—3 to 8 inches; yellowish brown (10YR 5/6) fine sand;

single grained; loose; common fine and medium roots; moderately acid; abrupt irregular boundary.
Cr—8 inches; soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Thickness of the solum:* 3 to less than 20 inches
*Depth to bedrock:* 3 to less than 20 inches
*Rock fragments:* In many pedons, up to 5 percent gravel- to boulder-sized fragments of limestone or chert at the surface or in the soil
*Reaction:* Strongly acid or moderately acid in the A horizon, except where lime has been added, and moderately acid to neutral in the C horizon

*A horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 to 3

*C horizon:*
Color—hue of 10YR, value of 5 to 8, and chroma of 2 to 6
Pockets—few or common fine to coarse pockets in shades of white or light gray in most pedons
Redoximorphic features—none to common iron masses and pore linings in shades of brown or yellow
Texture—sand or fine sand

*Cr layer:*
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Starke Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderate or moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Albany, Chaires, Clara, Croatan, Leon, Lutterloh, Mascotte, Ocilla, Osier, Ousley, Pamlico, Plummer, Pottsburg, Sapelo, Surrency, Tennille, Tooles, Wekiva, and Wesconnett soils
*Taxonomic class:* Loamy, siliceous, semiactive, thermic Grossarenic Paleaquults

**Typical Pedon**

Starke mucky fine sand in an area of Surrency, Starke, and Croatan soils, depressional, in Taylor County; USGS Boyd topographic quadrangle; about 9 miles north of Perry, 2,200 feet north and 1,800 feet east of the southwest corner of sec. 22, T. 3 S., R. 7 E.

A1—0 to 6 inches; black (10YR 2/1) mucky fine sand; weak medium granular structure; very friable; very strongly acid; gradual wavy boundary.
A2—6 to 21 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; very strongly acid; clear wavy boundary.
E1—21 to 32 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; very strongly acid; gradual wavy boundary.
E2—32 to 51 inches; light gray (10YR 7/2) fine sand; single grained; loose; very strongly acid; clear wavy boundary.
Btg1—51 to 56 inches; light gray (10YR 7/1) fine sandy loam; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; common distinct dark yellowish brown (10YR 4/6) iron masses; very strongly acid; gradual wavy boundary.
Btg2—56 to 80 inches; light gray (10YR 7/1) sandy clay loam; massive; friable; sand grains coated and bridged with clay; very strongly acid.

**Range in Characteristics**

*Thickness of the solum:* More than 60 inches
*Reaction:* Extremely acid to moderately acid

*Oa horizon (where present):*
Thickness—less than 8 inches
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*A horizon:*
Color—hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3

*E horizon:*
- Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 3; or neutral in hue and value of 4 to 7
- Redoximorphic features—none to common iron masses and pore linings in shades of yellow or brown
- Texture—sand, fine sand, loamy sand, or loamy fine sand

*Btg horizon:*
- Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
- Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
- Texture—sandy loam, fine sandy loam, or sandy clay loam

*Cg horizon (where present):*
- Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
- Texture—sand to sandy clay

## Steinhatchee Series

*Depth class:* Moderately deep
*Drainage class:* Poorly drained
*Permeability:* Moderately rapid in the spodic horizon and moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone bedrock
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods
*Commonly associated soils:* Chaires, Goldhead, Leon, Meadowbrook, Ocilla, Plummer, Pottsburg, Tennille, Tooles, Wesconnett, and Yellowjacket soils
*Taxonomic class:* Sandy, siliceous, thermic Alfic Alaquods

### Typical Pedon

Steinhatchee fine sand in an area of Steinhatchee-Tennille complex in Dixie County, Florida; USGS Cross City West topographic quadrangle; about 7 miles west-southwest of Cross City, 2,200 feet south and 750 feet west of the northeast corner of sec. 20, T. 10 S., R. 11 E.

Ap—0 to 5 inches; fine sand, dark gray (10YR 4/1) rubbed, salt-and-pepper appearance unrubbed; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; clear wavy boundary.

E—5 to 18 inches; gray (10YR 5/1) fine sand; common medium distinct very dark gray (10YR 3/1) and dark grayish brown (10YR 4/2) streaks; single grained; loose; many fine and medium roots; very strongly acid; abrupt wavy boundary.

Bh1—18 to 22 inches; black (10YR 2/1) fine sand; common medium and coarse faint dark brown (7.5YR 3/2) bodies; massive; friable; sand grains are coated with colloidal organic matter; few fine and medium roots; very strongly acid; clear wavy boundary.

Bh2—22 to 25 inches; dark brown (7.5YR 3/2 and 3/4) fine sand in a mixed pattern; massive; very friable; few fine and very fine roots; very strongly acid; clear wavy boundary.

Bw—25 to 29 inches; yellowish brown (10YR 5/4) fine sand; common fine and medium distinct dark grayish brown (10YR 4/2) and very dark grayish brown (10YR 3/2) bodies and streaks; single grained; loose; few fine and very fine roots; very strongly acid; abrupt wavy boundary.

Btg—29 to 35 inches; gray (10YR 6/1) sandy clay loam; weak fine subangular blocky structure; sticky and plastic; sand grains bridged and coated with clay; few very fine roots; many fine and medium prominent yellowish brown (10YR 5/6) and few fine and medium prominent red (2.5YR 4/8) iron masses and pore linings; slightly acid; abrupt irregular boundary.

Cr—35 inches; light gray (10YR 7/2) limestone bedrock that can be dug with light power machinery.

### Range in Characteristics

*Solum thickness and depth to bedrock:* 24 to 40 inches
*Reaction:* Very strongly acid to moderately acid in the A, E, Bh, and Bw horizons, except where lime has been added, and moderately acid to neutral in the Btg horizon

*A or Ap horizon:*
- Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4

*E horizon:*
- Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
- Redoximorphic features—none to many iron accumulations in shades of red, brown, and yellow and few or common splotches and stripped areas in the matrix in shades of gray

*Bh horizon:*
- Color—hue of 10YR to 5YR, value of 2 or 3, and chroma of 1 to 4; or neutral in hue and value of 2 or 3

Intrusions—in many pedons material that has colors and textures similar to those of the E horizon

*Bw horizon:*
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 or 4
Redoximorphic features—few to many iron masses and pore linings in shades of red, brown, or yellow

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4 to 6
Redoximorphic features—few to many iron depletions in shades of gray and iron accumulations in shades of yellow, brown, and red
Texture—sandy loam, fine sandy loam, or sandy clay loam with 50 percent or more fine or coarser sand
*Rock fragments:* In some pedons 1 to 3 percent gravel- or cobble-sized fragments of limestone in the lower part of the horizon

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Surrency Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderately rapid to moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Albany, Croatan, Eunola, Mandarin, Mascotte, Ocilla, Otela, Pamlico, Plummer, Sapelo, Seaboard, Starke, and Yellowjacket soils
*Taxonomic class:* Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults

### Typical Pedon

Surrency mucky fine sand in an area of Surrency, Starke, and Croatan soils, depressional, in Taylor County; USGS Fenholloway topographic quadrangle; about 9.5 miles east-southeast of Perry, 1,000 feet south and 2,500 feet east of the northwest corner of sec. 6, T. 5 S., R. 9 E.

A—0 to 16 inches; black (10YR 2/1) mucky fine sand; weak fine granular structure; very friable; very strongly acid; clear wavy boundary.
E—16 to 38 inches; light gray (10YR 7/1) fine sand; single grained; loose; very strongly acid; gradual wavy boundary.
Btg—38 to 80 inches; gray (10YR 5/1) sandy clay loam; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; common fine distinct yellowish brown (10YR 5/6) iron masses; very strongly acid.

### Range in Characteristics

*Thickness of the solum:* 60 to more than 80 inches
*Reaction:* Extremely acid to strongly acid

*A horizon:*
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3

*E horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Redoximorphic features—none to common iron masses and pore linings in shades of yellow and brown
Texture—sand, fine sand, loamy sand, or loamy fine sand

*Btg horizon:*
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Redoximorphic features—few to many iron depletions in shades of gray and iron masses in shades of yellow, brown, and red
Texture—sandy loam, fine sandy loam, or sandy clay loam

## Tennille Series

*Depth class:* Very shallow and shallow
*Drainage class:* Poorly drained
*Permeability:* Rapid throughout
*Parent material:* Sandy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flats, flatwoods, and flood plains
*Commonly associated soils:* Chaires, Lutterloh, Mandarin, Maurepas, Meadowbrook, Moriah, Ousley, Plummer, Seaboard, Steinhatchee, Tooles, and Wekiva soils
*Taxonomic class:* Siliceous, thermic Lithic Psammaquents

### Typical Pedon

Tennille fine sand in an area of Tooles-Tennille-Nutall complex, frequently flooded, in Dixie County, Florida; USGS Shired Island topographic quadrangle; about 15 miles south of Cross City, 2,200 feet west and 1,800 feet south of the northeast corner of sec. 24, T. 12 S., R. 11 E.

Ap—0 to 6 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; many fine and medium roots; slightly acid; clear smooth boundary.
C—6 to 14 inches; mixed brown (10YR 5/3) and dark grayish brown (10YR 4/2) fine sand; single grained; loose; common very fine and fine roots; common fine faint pale brown (10YR 6/3) iron masses and pore linings; neutral; abrupt irregular boundary.
2R—14 to 80 inches; soft, weathered, fractured limestone bedrock that can be dug with light excavation equipment.

### Range in Characteristics

*Thickness of the solum:* 6 to 20 inches
*Depth to bedrock:* 6 to 20 inches. Small solution holes that are 20 to 60 inches deep and 1 to 2 feet in diameter or pinnacles of rock outcrop are present in many pedons.
*Reaction:* Slightly acid to neutral throughout, except where lime has been added

*A or Ap horizon:*
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4
*Rock fragments:* Up to 4 percent gravel- to cobble-sized fragments of limestone

*C horizon:*
Color—hue of 10YR, value of 4 to 6, and chroma of 1 to 6. Chroma of 3 or more with stripped areas in the matrix is indicative of wetness.
Redoximorphic features—none to many iron masses and pore linings in shades of yellow, red, and brown
Texture—fine sand or loamy fine sand. Thin lenses of sandy loam are above the limestone in solution holes.
Rock fragments—up to 5 percent stone- to cobble-sized fragments of limestone

*Cr layer:*
Color—hue of 10YR, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Tooles Series

*Depth class:* Deep
*Drainage class:* Poorly drained or very poorly drained
*Permeability:* Slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone (fig. 16)
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Flatwoods, flats, flood plains, and depressions
*Commonly associated soils:* Bayvi, Bodiford, Chaires, Clara, Croatan, Eunola, Goldhead, Leon, Lutterloh, Mandarin, Matmon, Maurepas, Meadowbrook, Melvina, Moriah, Nutall, Ocilla, Osier, Seaboard, Starke, Steinhatchee, Tennille, and Wekiva soils
*Taxonomic class:* Loamy, siliceous, superactive, thermic Arenic Albaqualfs

### Typical Pedon

Tooles fine sand in an area of Tooles-Meadowbrook complex in Dixie County, Florida; USGS Mallory Swamp topographic quadrangle; about 8 miles north of

Cross City, 2,300 feet north and 1,000 feet west of the southeast corner of sec. 27, T. 8 S., R. 11 E.

Ap—0 to 8 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear wavy boundary.
E—8 to 23 inches; brown (10YR 5/3) fine sand; single grained; loose; common fine and medium roots; moderately acid; diffuse wavy boundary.
Bw—23 to 35 inches; yellowish brown (10YR 5/6) fine sand; single grained; loose; common fine and medium roots; many medium distinct brownish yellow (10YR 6/6) iron masses and pore linings; strongly acid; abrupt wavy boundary.
Btg1—35 to 46 inches; light gray (5Y 7/1) sandy clay loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; many medium prominent yellowish brown (10YR 5/6) iron masses and pore linings; slightly acid; abrupt wavy boundary.
Btg2—46 to 55 inches; pale yellow (2.5Y 8/2) clay loam; slightly plastic; few fine roots; many medium prominent yellowish brown (10YR 5/6) iron masses and pore linings; moderately alkaline; diffuse wavy boundary.
2Cr—55 inches; pale yellow (2.5Y 8/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade.

**Range in Characteristics**

*Thickness of the solum:* 41 to 60 inches
*Depth to bedrock:* 41 to 60 inches
*Reaction:* Extremely acid to neutral in the A horizon, except where lime has been added; strongly acid to neutral in the E and Bw horizons; and neutral to moderately alkaline in the Btg horizon

*Oa horizon (where present):*
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*A or Ap horizon:*
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2

*E horizon (where present):*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2
Redoximorphic features—none to common iron masses and pore linings in shades of yellow, brown, and red

*Bw horizon:*
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8

*Btg horizon:*
Color—hue of 10YR or 5GY, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
Redoximorphic features—few to many iron depletions in shades of gray and iron masses and pore linings in shades of yellow, brown, and red
Texture—sandy clay loam or clay loam

*2Cr layer (where present):*
Color—hue of 10YR or 2.5Y, value 6 to 8, and chroma of 1 to 4
Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer:*
Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Wekiva Series

*Depth class:* Shallow and moderately deep
*Drainage class:* Very poorly drained or poorly drained
*Permeability:* Moderately slow in the argillic horizon
*Parent material:* Sandy and loamy marine sediments overlying limestone
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Rises, knolls, flats, flatwoods, flood plains, and depressions
*Commonly associated soils:* Bayvi, Chaires, Mandarin, Meadowbrook, Melvina, Moriah, Otela, Ousley, Plummer, Steinhatchee, Tennille, and Tooles soils
*Taxonomic class:* Loamy, siliceous, active, thermic, shallow Aeric Endoaqualfs

**Typical Pedon**

Wekiva fine sand in an area of Wekiva-Shired-Tooles

complex, occasionally flooded, in Dixie County, Florida; USGS Cross City West topographic quadrangle; about 5 miles west-northwest of Cross City, 1,900 feet south and 1,200 feet west of the northeast corner of sec. 27, T. 9 S., R. 11 E.

A—0 to 6 inches; black (10YR 2/1) fine sand; weak fine granular structure; very friable; many fine and medium roots; moderately acid; clear wavy boundary.

EB—6 to 14 inches; yellowish brown (10YR 5/4) fine sand; common sand- and gravel-sized fragments of ironstone; single grained; loose; few fine and medium roots; moderately acid; abrupt wavy boundary.

Bt—14 to 21 inches; yellowish brown (10YR 5/4 and 5/6, mixed) fine sandy loam; weak fine subangular blocky structure; very friable; sand grains coated and bridged with clay; common fine and medium roots; slightly acid; abrupt irregular boundary.

Cr—21 inches; very pale brown (10YR 7/2), soft, weathered, fractured limestone bedrock that can be dug with difficulty with a spade; many fossilized shell fragments.

**Range in Characteristics**

*Solum thickness and depth to bedrock:* Generally 10 to 20 inches but ranges to as much as 30 inches in the deepest part of the cycle. Solution holes in many pedons extend as deep as 60 inches.

*Rock fragments:* None or few gravel- to boulder-sized fragments in the solum or on the surface in many areas

*Reaction:* Moderately acid to neutral throughout the solum, except where lime has been added

*A horizon:*
- Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4

*E horizon (where present):*
- Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2

*EB horizon:*
- Color—hue of 10YR, value of 4 to 6, and chroma of 2 to 6
- Redoximorphic features—none to common iron depletions in shades of gray and iron masses and pore linings in shades of brown or yellow

*Bt horizon:*
- Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 8
- Redoximorphic features—none to common iron depletions in shades of gray and iron accumulations in shades of brown or yellow
- Texture—fine sandy loam or sandy clay loam

*Btg horizon (where present):*
- Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2; or neutral in hue and value of 5 or 6
- Redoximorphic features—none to common iron depletions in shades of gray and iron masses and pore linings in shades of yellow or brown
- Texture—fine sandy loam or sandy clay loam

*Cr layer:*
- Color—hue of 10YR or 2.5Y, value 6 to 8, and chroma of 1 to 4
- Bedrock—soft, weathered, fractured limestone that can be dug with difficulty with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations that contain few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are filled with material that ranges in texture from sandy loam to sandy clay. The holes range from 4 to 12 inches in diameter. The depth to limestone varies widely within short distances. Thickness ranges from 6 inches to 2 feet.

*R layer (typically present):*
- Bedrock—hard, unweathered limestone that has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some pedons it has solution holes.

## Wesconnett Series

*Depth class:* Very deep
*Drainage class:* Very poorly drained
*Permeability:* Moderate or moderately rapid in the spodic horizon
*Parent material:* Sandy marine sediments
*Landscape:* Lowlands on the lower Coastal Plain
*Landform:* Depressions
*Commonly associated soils:* Boulogne, Chipley, Dorovan, Evergreen, Hurricane, Leon, Lynn Haven, Mandarin, Matmon, Ortega, Osier, Ousley, Pamlico, Pottsburg, Ridgewood, and Steinhatchee soils
*Slope:* 0 to 2 percent
*Taxonomic class:* Sandy, siliceous, thermic Typic Alaquods

**Typical Pedon**

Wesconnett fine sand in an area of Wesconnett, Evergreen, and Pamlico soils, depressional, in Taylor County; USGS Fenholloway topographic quadrangle;

about 14.5 miles east of Perry, 2,500 feet west and 2,600 feet south of the northeast corner of sec. 35, T. 4 S., R. 9 E.

A—0 to 10 inches; black (10YR 2/1) fine sand; weak medium granular structure; very friable; many fine to coarse roots; very strongly acid; gradual wavy boundary.
Bh1—10 to 21 inches; very dark gray (5YR 3/1) fine sand; massive; friable; sand grains coated with organic matter; few fine and medium roots; very strongly acid; diffuse smooth boundary.
Bh2—21 to 40 inches; dark reddish brown (5YR 3/2) fine sand; massive; friable; sand grains coated with organic matter; few fine roots; strongly acid; clear wavy boundary.
BE—40 to 62 inches; brown (10YR 5/3) fine sand; single grained; loose; strongly acid; gradual wavy boundary.
C—62 to 80 inches; light gray (10YR 7/2) fine sand; single grained; loose; strongly acid.

**Range in Characteristics**

*Thickness of the solum:* 30 to 80 inches
*Reaction:* Extremely acid to slightly acid throughout
*Texture:* Sand or fine sand throughout the mineral horizons

*Oa horizon (where present):*
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3
Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*A horizon:*
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 to 4

*Bh horizon:*
Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3

*E horizon (where present):*
Color—hue of 10YR, value of 4 to 7, and chroma of 3 or 4

*BE horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 3 or 4

*Eg horizon (where present):*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

*C horizon:*
Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

## Yellowjacket Series

*Depth class:* Deep and very deep
*Drainage class:* Very poorly drained
*Permeability:* Rapid throughout
*Parent material:* Highly decomposed organic matter over sandy marine sediments
*Landscape:* Coastal swamps on the lower Coastal Plain
*Landform:* Flood plains and depressions
*Commonly associated soils:* Bodiford, Clara, Eunola, Leon, Matmon, Maurepas, Osier, Otela, Pamlico, and Surrency soils
*Taxonomic class:* Sandy or sandy-skeletal, siliceous, euic, thermic Terric Medisaprists

**Typical Pedon**

Yellowjacket muck in an area of Yellowjacket and Maurepas mucks, frequently flooded, in Taylor County; USGS Keaton Beach topographic quadrangle; about 31 miles south of Perry, 1,100 feet south and 2,350 feet west of the northeast corner of sec. 28, T. 8 S., R. 8 E.

Oa1—0 to 6 inches; black (7.5YR 2/1) muck; about 40 percent fiber unrubbed, less than 10 percent rubbed; weak fine granular structure; very friable; many fine, medium, and coarse roots; slightly acid; gradual wavy boundary.
Oa2—6 to 42 inches; black (10YR 2/1) muck; about 25 percent fiber unrubbed, less than 5 percent rubbed; massive; very friable; common fine and many medium and coarse roots; neutral; gradual wavy boundary.
AC—42 to 60 inches; very dark gray (10YR 3/1) fine sand; massive; very friable; few medium and coarse roots; moderately alkaline; gradual wavy boundary.
Cg—60 to 80 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; moderately alkaline.

**Range in Characteristics**

*Fiber content:* 20 to 75 percent unrubbed and 5 to 15 percent rubbed; large fragments of wood in some organic layers
*Depth to bedrock:* 40 to more than 80 inches
*Reaction:* Moderately acid to moderately alkaline in the Oa horizon and neutral to moderately alkaline in the AC and Cg horizons

*Oa horizon:*
Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or less; or neutral in hue and value of 2 or 3

Fiber content—10 to 33 percent unrubbed and less than 10 percent rubbed

*AC horizon:*

Color—hue of 10YR to 5YR, value of 2 or 3, and chroma of 1 to 3; or neutral in hue and value of 2 or 3

Texture—sand, fine sand, loamy sand, loamy fine sand, or their mucky analogs

*Cg horizon:*

Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

Texture—sand, fine sand, loamy sand, or loamy fine sand and, in some pedons, thin strata of sandy loam or sandy clay loam

*Cr layer (where present):*

Bedrock—weathered, soft limestone or accumulations of secondary calcium carbonate with hard limestone fragments that can be dug with difficulty with a spade

*R layer (where present):*

Bedrock—unweathered, hard limestone beginning at depth of 40 inches in some pedons. It can be chipped but not dug with a spade. Some pedons have solution holes that range from 6 to 18 inches in diameter and from 18 to 45 inches in depth. They are filled with sapric material in the upper part and with sand, soft masses and accumulations of secondary calcium carbonates, or limestone fragments in the lower part.

# Formation of the Soils

In this section, the factors of soil formation are described and related to the soils in Taylor County. The processes of horizon differentiation are also explained, and the geomorphology of the county is described.

## Factors of Soil Formation

The kind of soil that forms in an area depends on five major factors. These factors are the physical and mineral composition of the parent material; the climate under which the soil material has accumulated and has existed since accumulation; the organisms, or plant and animal life on and in the soil; the relief, or lay of the land; and the length of time that these factors have acted on the soil material (Jenny, 1941; Jenny, 1980). All of these factors affect the formation of each soil, but the relative importance of each factor differs from place to place. In some areas one factor may dominate the formation of a soil and determine most of the soil properties. For example, if the parent material consists of pure quartz sand, which is highly resistant to weathering, the soil generally has weakly expressed horizons. Even in quartz sand, however, a distinct profile can be formed under certain types of vegetation if the relief is low and flat and the water table is high.

The interrelationship among these five factors is complex, and the effects of any one factor cannot be isolated and completely evaluated. Each factor is described separately, and the probable effects of each are indicated.

### Parent Material

The parent materials of the soils in Taylor County consist mostly of deposits of marine origin. These deposits are mostly quartz sand and contain varying amounts of clay and shell fragments. Limestone and dolostone form near-surface bedrock in most of the county. Clay is more abundant in the soils that formed in the sediment on marine terraces and in lagoons. It is virtually absent on shoreline ridges where most deposits are eolian sand. The parent material was transported by ocean currents. The ocean covered the area a number of times during the Pleistocene age.

The parent materials in the county differ somewhat in mineral and chemical composition and in physical structure. The main physical differences, such as those between sand, silt, and clay, can be observed in the field. Other differences, such as mineral and chemical composition, are important to soil formation and affect the physical and chemical characteristics of the soils. Many differences among the soils in the county reflect original differences in the parent material as it was laid down.

Some organic soils are located throughout the county. They formed in partly decayed wetland vegetation.

### Climate

Climate, particularly temperature and rainfall, is the main factor that determines the rate and nature of the physical, chemical, and biological processes that affect the weathering of soil material. Rainfall, changes in temperature, wind, and sun advance the breakdown of rocks and minerals, the release of chemicals, and other processes that affect the development of the soils. The amount of water that percolates through a soil depends on rainfall, relative humidity, permeability of the soil, and physiographic position of the soil. Temperature influences the kinds of organisms in a soil, the growth of the organisms, and the speed of physical and chemical reactions in the soil.

Taylor County has a warm, humid climate characterized by long, hot summers and short, mild winters. The soils generally have a low content of bases because most of the rainfall percolates downward through the soil. Because the rainfall generally is well distributed, most of the soils retain moisture throughout the year. Climate throughout the county is uniform; therefore, it has had about the same affect on soil development in all parts of the county. The soils in the county are mostly highly weathered, leached, strongly acid, and low in natural fertility and content of organic matter.

### Plants and Animals

Plants, animals, and other organisms have a significant role in soil formation. Plant and animal life

can increase the content of organic matter and nitrogen, increase or decrease the content of plant nutrients, and change the structure and porosity of the soils.

Plants recycle plant nutrients, accumulate organic matter, and provide food and cover for animal life. They stabilize the surface layer so that soil-forming processes can continue. They also stabilize the environment for soil-forming processes by protecting the soil from extremes in temperature.

The soils in Taylor County formed under a succession of plants. This succession is still evident in the smooth cordgrass and black rush in the marshlands, the big cordgrass and giant cutgrass in the brackish-water areas, the hardwood trees and cypress in the very poorly drained areas, and the pine trees in the moderately well drained and poorly drained areas.

Animals rearrange soil material by roughening the surface, forming and filling channels, and shaping peds and voids. The soil is mixed by the channeling of ants, wasps, worms, and spiders and by the burrowing of crustacea, such as crabs and crawfish, and turtles and other reptiles. Bacteria, fungi, and other microorganisms hasten decomposition of organic matter and increase the rate of release of minerals for additional plant growth. People affect the soil-forming process by tilling the soil for agriculture, removing natural vegetation, establishing other plants, and reducing or increasing the fertility of the soil.

The net gains and losses caused by plants and animals in the soil-forming process are important in the county. Fiddler crab and other crustacea continuously burrow and rework the upper horizons of Bayvi soils. Plant residue provides most of the organic matter for the formation of the umbric epipedon in Surrency and Starke soils. Plants recycle the calcium in Wekiva soils and provide the stability necessary for the formation of the ochric epipedon.

### Relief

Relief, or lay of the land, affects soil formation by influencing microclimate and water relationships. Soil temperature is influenced by altitude and by the orientation of the slope toward or away from the sun. Relief affects drainage, runoff, erosion, soil fertility, and vegetation.

Even though the terrain in Taylor County is mostly nearly level, relief has a significant effect on the soils. Most of the soils are sandy because the parent material of most of the soils consists of sandy marine deposits. Because sandy soils have low available water capacity and easily become droughty, most of the water available to plants comes from the water table. As a result, the depth to the water table is extremely important in the determination of the type of vegetation that grows in a particular area.

The depth to the water table also affects internal drainage. On the sand ridges, where the water table is deep and the soils are highly leached, soluble plant nutrients, colloidal clays, and organic matter are carried rapidly downward to the sandy soil.

In areas of the flatwoods, the water table is commonly at or near the surface and rarely drops below a depth of 5 feet. Organic matter is translocated down a short distance and forms a humus-rich spodic horizon, or Bh horizon. This horizon is referred to locally as a hardpan.

In low areas or depressions where the water table is generally above the surface, muck accumulates under marsh or swamp vegetation. As these plants die, the residue accumulates in the water where oxygen is excluded. The residue slowly, and only partly, decays. The amount of muck that accumulates depends mainly on the depth and duration of standing water. In some wet areas, accumulations of organic matter have formed a thick, black topsoil on the mineral soil instead of a muck surface layer.

### Time

Time is an important factor affecting soil formation. The physical and chemical changes brought about by climate, plants and animals, and relief are slow. The length of time needed to convert raw, geologic material into soil varies according to the nature of the geologic material and the interaction of the other factors. Some basic minerals from which soils are formed weather fairly rapidly, while other minerals are chemically inert and show little change over long periods. The formation of horizons caused by translocation of fine particles in the soil varies under different conditions, but the processes always take a relatively long time.

In Taylor County the dominant geologic materials are inert. The sand is almost pure quartz and is highly resistant to weathering. The finer textured silt and clay are the products of earlier weathering.

Relatively little geologic time has elapsed since the parent material in the county was laid down or emerged from the sea. The loamy and clayey horizons formed in place through processes of clay translocation.

## Processes of Horizon Differentiation

Soil morphology refers to the processes that involve the formation of soil horizons or soil horizon differentiation. The processes involved in the

differentiation of horizons in Taylor County are accumulation of organic matter, leaching of carbonates, reduction and transfer of iron, and accumulation of silicate clay minerals. In the formation of most of the soils, more than one of these processes is involved.

Some organic matter has accumulated in the upper part of most of the soils in the county, forming an A horizon. The content of organic matter is low in some of the soils and fairly high in others.

Carbonates and salts have been leached in most of the soils. Because the leaching permitted the subsequent translocation of silicate clay material in some soils, the effects of leaching have been indirect. Most of the soils in the county are leached to varying degrees.

The process of chemical reduction, or gleying, is evident in many of the soils in the county but not in the excessively drained soils. Gleying is caused by wetness. A gray matrix color in the B horizon in many soils and grayish mottles in other soils indicate the reduction of iron. In some horizons reddish brown mottles and concretions indicate the segregation of iron and a fluctuating water table.

The translocation of silicate clay, colloidal organic matter, and iron oxides has contributed to horizon development in many of the soils in the county. The movement of clay, organic matter, or iron is evident in many of the soils. Examples include a leached E horizon that is light in color, a Bt or Bh horizon in which sand grains are bridged and coated with clay or colloidal organic matter, and patchy clay films on faces of peds and in root channels. In Taylor County, other processes of soil formation are less important in the formation of horizons than the translocation of silicate clay.

## Geomorphology

Frank R. Rupert, geologist, Florida Department of Natural Resources, Florida Geological Survey, Bureau of Geology, prepared this section.

Taylor County is situated in Florida's Big Bend area, lying wholly within a broad geomorphic subdivision named the Gulf Coastal Lowlands (Healy, 1975). The Gulf Coastal Lowlands (fig. 17) are characterized as a low, flat, commonly swampy, seaward-sloping plain. Surface slope ranges from 1 to 5 feet per mile seaward. The maximum land surface elevation in Taylor County is about 101 feet above mean sea level (MSL) in the northern part of the county along the border with Madison County. Limestone and dolostone, covered by a veneer of unconsolidated sand, form the near-surface bedrock in most of the county. The Gulf Coastal Lowlands extend from the modern shoreline inland to the line where the elevation is about 100 feet above MSL. Similar terrain has been named the Limestone Shelf and Hammocks in neighboring Dixie County and the Woodville Karst Plain in adjacent Jefferson County (Puri, 1967; Yon, 1966).

The irregular, highly karstic Oligocene and Eocene carbonates underlying Taylor County are masked by a blanket of undifferentiated Pleistocene sand (figs. 18 and 19). Near the coast, the undifferentiated sands are thin or absent. West of Perry, in the San Pedro Bay region, these sands may be as much as nearly 80 feet thick and contain enough clay to function as local aquitards to the underlying Floridan aquifer system. The top of the underlying carbonate bedrock rises gently from about sea level at the coast to about 60 feet above MSL in the northeastern corner of the county (Alison, n.d.). Most of county is commercial woodland or agricultural land. Near the coast, the karst plain merges seaward into the coastal marshes and continues offshore as a broad, sand-covered, continental shelf. Small artesian springs flow from the near-surface limestone. During periods of heavy rainfall, parts of the karst plain may flood, forming a shallow swamp. Drainage from the coastal hammocks is sluggish and flows through a number of small creeks and sloughs that empty into the coastal swamps.

Most of the area of the Gulf Coastal Lowlands is ancient marine-terrace terrain. Pleistocene seas alternately flooded and retreated from this region, depositing a step-like series of marine terraces that generally parallel the modern coastline. Three elevation zones are described for the marine terraces in Taylor County. They are the Silver Bluff Terrace (less than 10 feet above MSL), the Pamlico Terrace (8 to 25 feet above MSL), and the Wicomico Terrace (70 to 100 feet above MSL) (Healy, 1975). Imposed on these terrace surfaces are numerous relict Pleistocene marine features, such as bars, dunes, and beach ridge systems. The relict features can be observed far inland from the modern coastline. They are composed principally of white, quartz sand.

The Gulf shoreline in Taylor County is classified as a low-wave-energy, drowned karst coast. It is characterized by very low wave activity, a general lack of sand beaches, and an irregular outline. Series of small islets, or keys, comprised of limestone pinnacles are common along the southern part of the coastline. Extensive coastal salt marshes, interspersed with a few small sand beaches and numerous near-shore oyster bars, are at the interface between the land and sea along the length of the coast.

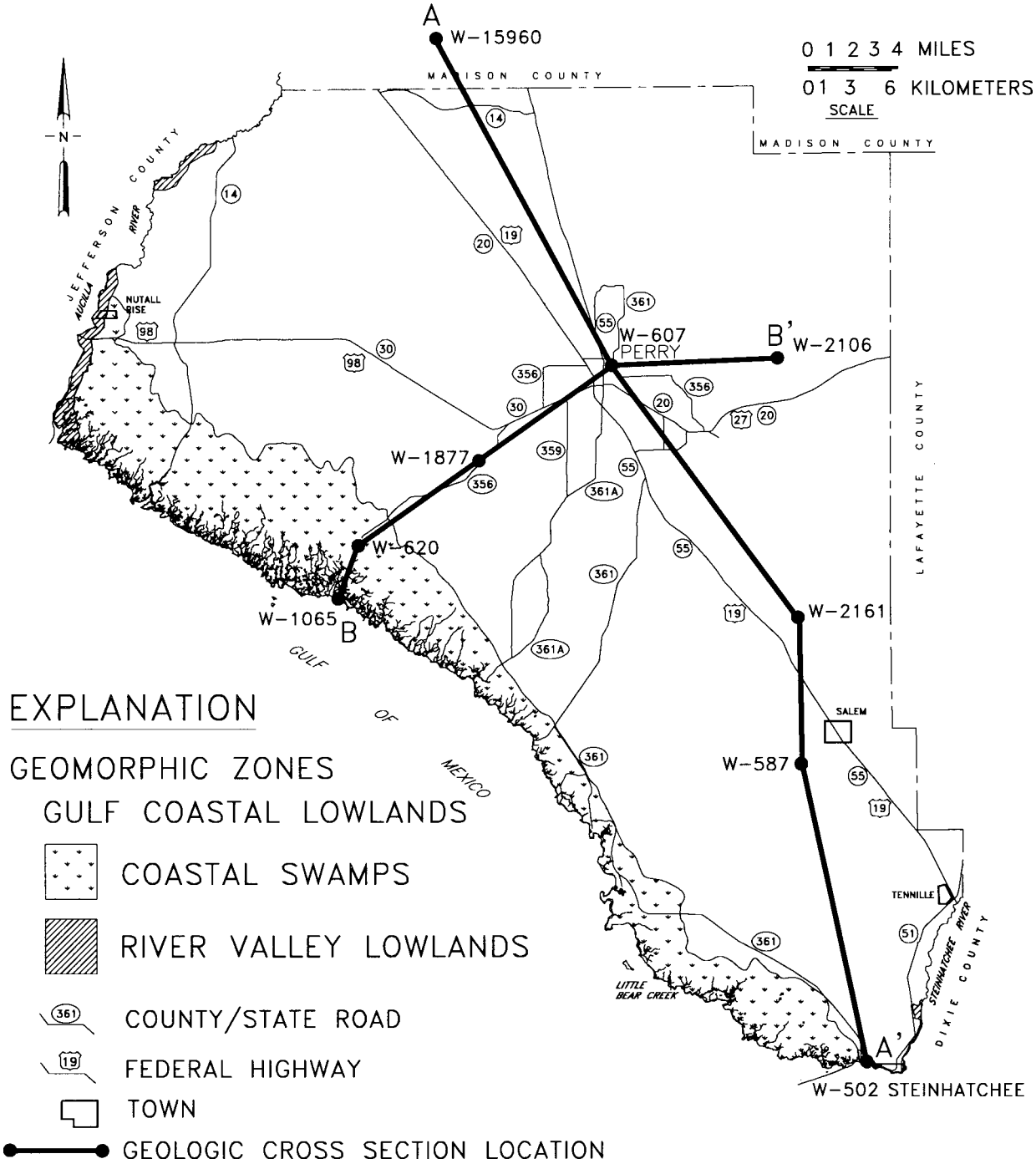


**Figure 17.—Locator map for cross sections and geomorphic features in Taylor County.**

## Coastal Swamps

A zone of low, flat, frequently flooded hammocks and pine flatwoods, rimmed on the seaward edge by salt marshes, is along the low-energy Gulf coastline of Taylor County. This region is named the Coastal Swamps Zone (White, 1970). It typically extends from the shore inland to the contour line at about 10 feet above MSL. This line ranges from about 1 to 4 miles inland (fig. 17). Due to a lack of sand input and the low wave-energy conditions along the Big Bend coastline, sand beaches are poorly developed or absent.

Numerous small surface streams, most of which arise in the swampy hammocks and bays in the

western part of the county, flow generally southwestward and empty into the Gulf of Mexico. Most of these streams are sluggish, tannic-water streams that flow in narrow channels and drain the interior swamps. Some are fed by small springs that seep freshwater from the carbonate rocks of the underlying Floridan aquifer system. Extensive salt marshes border the interface between the land and sea along most of the coast. These marshes consist of Juncus and Spartina grasses rooted in shallow, organic-rich silts and sands lying on limestone. They are dissected by small, seaward flowing tidal streams and creeks, which can also be fed by freshwater seeping out of the shallow limestone of the Floridan aquifer system.

## River Valley Lowlands

The Aucilla and Steinhatchee Rivers are the largest surface streams in the county. They form parts of the boundary between Taylor County and adjacent counties.

The Aucilla River forms the boundary between Taylor County and Jefferson County, which is to the northwest. The river flows southwest from Georgia to the Gulf of Mexico in a dissolutional valley of variable width, carved in the underlying Oligocene carbonates. The topographic lowlands immediately adjacent to the river, generally characterized by thin Holocene sands and clayey sands lying on limestone, comprise the Aucilla River Valley Lowlands (Yon, 1966). Elevation of the river valley floor ranges from about 35 feet above MSL in the northwestern part of Taylor County to sea level where the river enters the coastal swamps. Along most of its course, the valley is less than 1 mile wide. In places, rapids flow over exposed, silicified limestone. The Aucilla River is captured by subterranean drainage 4-1/2 miles north of U.S. Highway 98. About 2 miles of the underground course of the river is defined by closely spaced sinks. The river emerges 2-1/2 miles above the highway, flowing about 1-1/2 miles as a surface stream before flowing underground once again into a sink. The river reemerges in the western part of the county at the

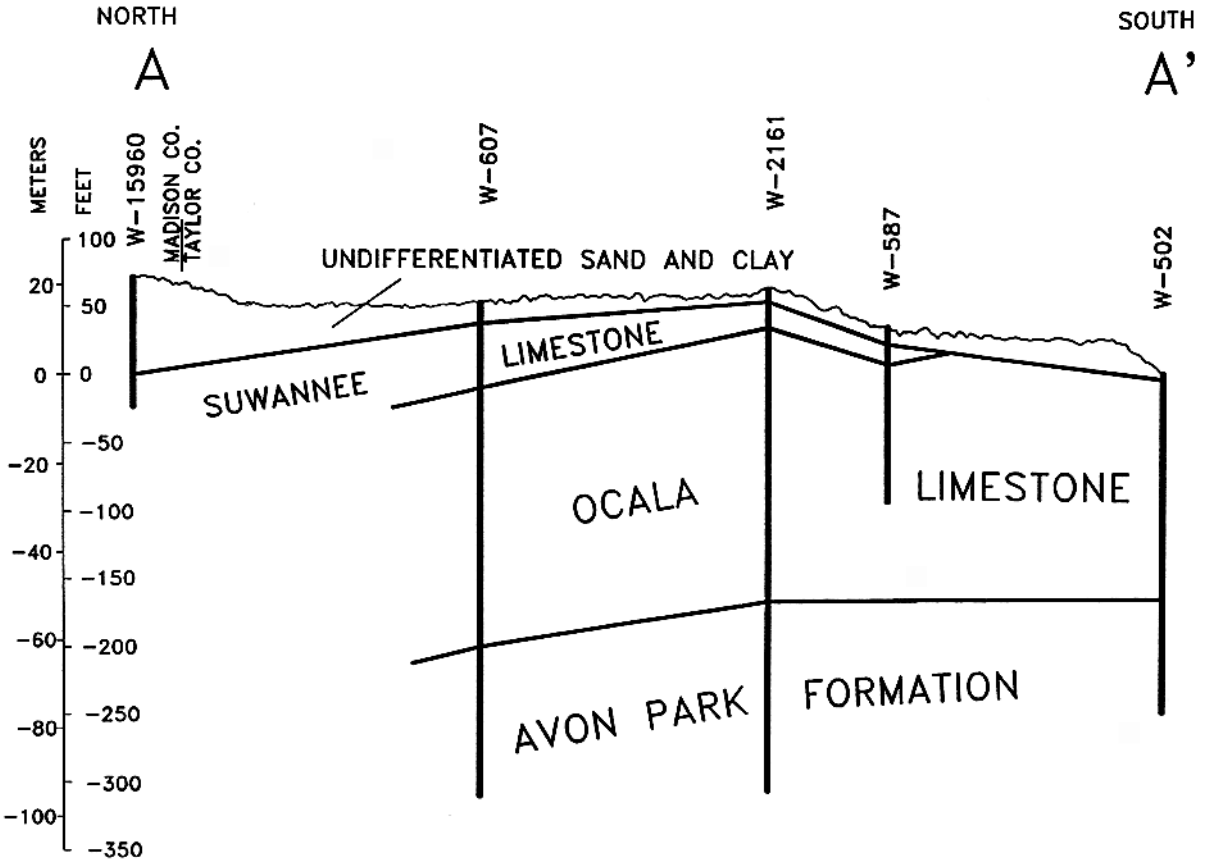


**Figure 18.—Cross section of geologic materials at sites A to A´. The vertical exaggeration is approximately 570 times true scale.**

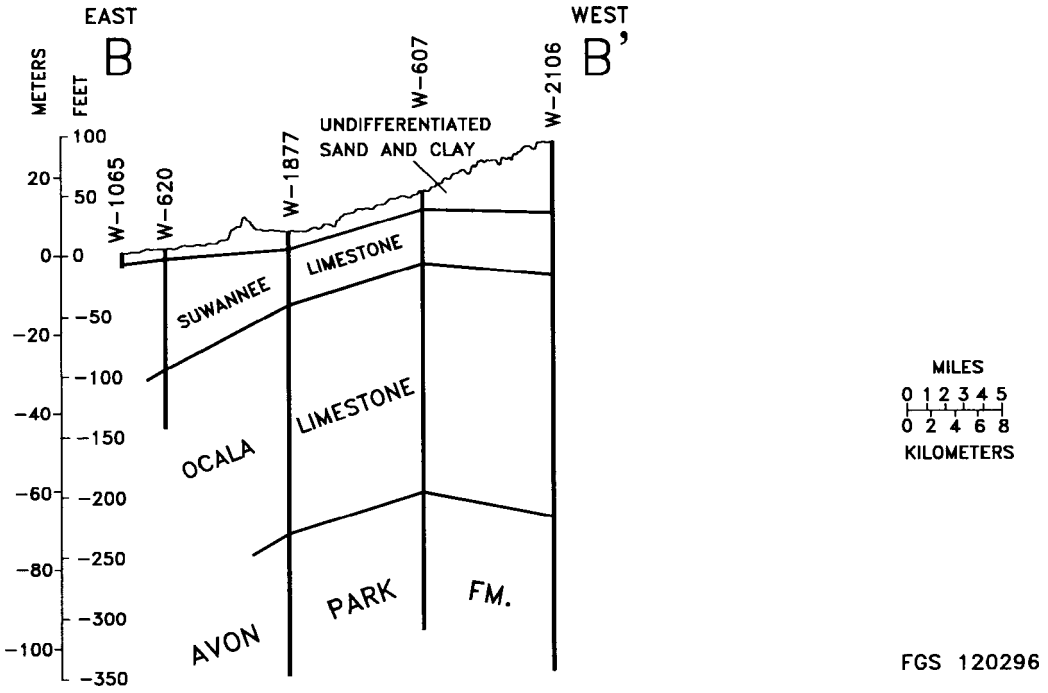


**Figure 19.—Cross section of geologic materials at sites B to B´. The vertical exaggeration is approximately 570 times true scale.**

community of Nutall Rise for the final course to the Gulf. The river broadens as it merges into the coastal swamps near the coast.

The Steinhatchee River arises in the swampy hammocks of adjacent Lafayette County and flows southwest in a narrow, incised valley generally lying 10 feet or less above MSL. It forms the southern boundary between Taylor and Dixie Counties. It flows in a narrow channel that is cut in Eocene carbonates, which commonly crop out along the lower part of the river. The river flows underground for about 1 mile near the community of Tennille and emerges about 0.3 mile west of U.S. Highway 19 (Puri, 1967). The underground part of the river is mirrored at the surface by a topographic valley that contains only intermittent flow. The Steinhatchee River is a sluggish, generally tannic stream that widens as it enters the salt marshes near the coast. The lowlands adjacent to the river are typically very narrow. They widen significantly in only one small area northeast of the town of Steinhatchee. Pleistocene and Holocene siliciclastic materials form a sediment veneer over the carbonates in the river bed and along the banks.

## Stratigraphy

The oldest rock commonly penetrated by water wells in Taylor County is marine limestone of the Eocene Avon Park Formation. Undifferentiated Pleistocene and Holocene surficial sands, clayey sands, and alluvium are the youngest sediments present. Figures 18 and 19 illustrate the shallow stratigraphy of the county. The Avon Park Formation and the younger overlying carbonates are important freshwater aquifers, and the following description of the geology of Taylor County is confined to these Eocene and younger sediments.

### Eocene Series

The Avon Park Formation is a lithologically variable Middle Eocene carbonate unit underlying all of Taylor County (Miller, 1986). It is typically yellowish-gray, grayish-orange, or dark yellowish brown dolostone, commonly interbedded with grayish-white or yellowish-gray limestones and dolomitic limestones. According to in-house well logs of the Florida Geological Survey, the unit may contain varying amounts of peat, lignite, and plant remains. Mollusks, echinoids, and foraminifera, where preserved, are the principal fossils present.

The depth to the top of the Avon Park Formation ranges from about 300 feet below land surface in the northwestern part of the county to about 90 feet below land surface in the southern part. Surface exposures of the formation do not occur in the county but do occur to the south in Levy County, over the crest of a positive subsurface structural feature named the Ocala

Platform. Data from deep oil test wells indicate that the Avon Park Formation ranges from about 800 to 1,400 feet in thickness under Taylor County.

Marine limestones of the Ocala Limestone unconformably overlie the Avon Park Formation under all of Taylor County (Puri, 1957; Scott, 1991). The Ocala Limestone is divided into an upper unit and a lower unit based on lithology. The lithology of the Ocala Limestone grades upward from alternating hard and soft, white, tan, or gray, fossiliferous limestone and dolomitic limestone in the lower unit into white, very light gray, or light yellowish-orange, abundantly fossiliferous, chalky limestones in the upper unit. Foraminifera, mollusks, bryozoans, and echinoids are the most abundant fossils in the unit.

The thickness of the Ocala Limestone sediments under Taylor County ranges from 80 to 220 feet. The Ocala Limestone generally thins against the structurally high Avon Park Formation toward the crest of the Ocala Platform in the southern and eastern parts of the county. The depth to the irregular and highly karstic top of the Ocala Limestone is generally 10 to 100 feet. The overlying Suwannee Limestone pinches out against the Ocala Limestone along a contact approximately extending northeast to southwest from near the town of Salem to Little Bear Creek on the gulf coast (fig. 17). North of this contact line, the Suwannee Limestone is the uppermost carbonate unit; to the south, the Suwannee limestone is absent and the Ocala Limestone forms the upper carbonate. The Ocala Limestone commonly crops out in the hammocks and coastal marshes in the southernmost part of the county. Offshore of the modern coastline, a thin blanket of quartz sand covers the Ocala Limestone. Exposures in the form of limestone boulders and pinnacles are common. Dolomitized exposures of the unit occur in the vicinity of the town of Steinhatchee, along the Steinhatchee River in the southernmost part of the county.

The highly permeable and cavernous nature of the Ocala Limestone makes it an important freshwater bearing unit of the Floridan aquifer system. Many drinking water wells in the southern part of Taylor County withdraw water from this limestone.

#### Oligocene Series

The Suwannee Limestone is an Oligocene-age marine limestone and dolostone underlying the northern two-thirds of Taylor County (Puri, 1957). It is typically a white, yellowish-gray, or grayish-brown, skeletal to micritic limestone, altered in some areas to variably recrystallized dolostone. Mollusks, foraminifera, echinoids, bryozoans, and ostracods, in various degrees of preservation, comprise the dominant fossil assemblage in the unit. The top of the Suwannee Limestone typically ranges in depth from as much as 50 feet below land surface in northwestern part of the county to the surface in some exposures in the west-central part of the county and along the Gulf coastline. The unit climbs and thins to the southeast. It decreases in thickness from about 50 feet in the northeastern part of the county to zero at its pinchout against the Ocala Limestone in the southern part of the county.

The Suwannee Limestone locally comprises the uppermost unit of the Floridan aquifer system. Shallow domestic and agricultural wells draw water from this unit.

#### Pleistocene-Holocene Series

Undifferentiated Pleistocene marine quartz sands and clayey sands form a thin veneer over all of Taylor County. They are generally less than about 50 feet thick throughout the county and thin to less than 20 feet near the coast. They directly overlie the karstic carbonates of the Suwannee and Ocala Limestones. Many of the larger and higher sand bodies in Taylor County are relict dunes, bars, and barrier islands associated with various Pleistocene high stands of the sea level.

Discontinuous deposits of sparsely-phosphatic, clayey sands, likely reworked Hawthorn Group sediments, comprise portions of the undifferentiated sediments in the northern part of Taylor County. These deposits are common in karst depressions and may, in part, represent Plio-Pleistocene paleosinkhole fill.

## Ground Water

Ground water is water that fills the pore spaces in subsurface rocks and sediments. In Taylor and adjoining counties, it is derived principally from precipitation. The bulk of the water consumed in Taylor County is withdrawn from ground water aquifers. Two aquifer systems are under Taylor County, the surficial aquifer system and the Floridan aquifer system.

#### Surficial Aquifer System

The surficial aquifer system is the uppermost freshwater aquifer in Taylor County. This nonartesian aquifer is in the county only within the Pleistocene undifferentiated sands and clays in the San Pedro Bay region in the northeastern part of county. In this area, a clay unit of variable thickness semiconfines the underlying Floridan aquifer system and separates it from the surficial aquifer system. In some areas, the Floridan and surficial aquifer systems are in hydrologic contact. In general, however, the two systems contain

chemically different water. The surficial aquifer system, where present, is unconfined, and the upper surface of the system is the water table. The water table generally fluctuates with precipitation and conforms to the topography of the land surface. Recharge to the surficial aquifer system is largely through rainfall percolating downward through the unconsolidated surficial sediments. To a lesser extent, it is by upward seepage from the underlying Floridan aquifer system. Water naturally discharges from the surficial aquifer by evaporation and downward seepage into the Floridan aquifer system. The surficial aquifer system is not used as a source of consumable water in Taylor County.

**Florida Aquifer System**

In Taylor County, the Floridan aquifer system is comprised of hundreds of feet of Eocene marine limestones, including the Avon Park Formation, the Ocala Limestone, and the Suwannee Limestone. The system is the principle source of drinking water in the county. It is an unconfined, nonartesian aquifer in most of the county, where porous, quartz sand directly overlies the limestone. In the San Pedro Bay area, clay units may serve to locally confine the aquifer. The depth to the top of the Floridan aquifer system generally corresponds to the depth to limestone and varies from less than five feet in the coastal marshes and river valley lowlands to more than 80 feet under the larger relict Pleistocene sand bodies. The potentiometric gradient is southwestward.

Recharge to the Floridan aquifer system in Taylor County is obtained from lateral inflow from the north and, to a lesser extent, from local rainfall percolating downward through the permeable surficial sands. The highest recharge by percolation occurs in a narrow, northwest-to-southeast trending swath of dune sands overlying karstic carbonates in the southwestern part of the county (Stewart, 1980).

Water leaves the Floridan aquifer system through natural down-gradient movement and subsequent discharge through numerous springs and seeps. These springs generally are in the river valley lowlands and along the coastal marshes, where the potentiometric surface of the Floridan aquifer system is at or above land surface.

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# Glossary

**ABC soil.** A soil having an A, a B, and a C horizon.

**AC soil.** A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

**Aeration, soil.** The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

**Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

**Alluvium.** Material, such as sand, silt, or clay, deposited on land by streams.

**Alpha,alpha-dipyridyl.** A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

**Animal unit month (AUM).** The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

**Aquic conditions.** Current soil wetness characterized by saturation, reduction, and redoximorphic features.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction in which a slope faces.

**Association, soil.** A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

**Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

| | |
|---|---|
| Very low | 0 to 0.05 |
| Low | 0.05 to 0.1 |
| Moderate | 0.1 to 0.15 |
| High | 0.15 to 0.20 |
| Very high | more than 0.20 |

**Basal area.** The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density and is commonly expressed in square feet.

**Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

**Bedding planes.** Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

**Bedding system.** A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

**Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

**Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

**Bottom land.** The normal flood plain of a stream, subject to flooding.

**Breast height.** An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

**Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

**Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

**California bearing ratio** (CBR). The load-supporting

capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

**Canopy.** The leafy crown of trees or shrubs. (See Crown.)

**Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

**Catena.** A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

**Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

**Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

**Chemical treatment.** Control of unwanted vegetation through the use of chemicals.

**Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

**Clay depletions.** Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

**Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

**Coarse textured soil.** Sand or loamy sand.

**Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

**Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

**Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

**Compressible** (in tables). Excessive decrease in volume of soft soil under load.

**Concretions.** Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

**Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

**Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

**Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

**Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

**Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

**Corrosion.** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

**Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

**Cropping system.** Growing crops according to a planned system of rotation and management practices.

**Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

**Crown.** The upper part of a tree or shrub, including the living branches and their foliage.

**Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

**Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.

**Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

**Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.

**Dense layer** (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Depth to rock** (in tables). Bedrock is too near the surface for the specified use.

**Depressions.** Landforms that are typically the sunken, lower parts of the earth's surface, have concave relief, and do not have natural outlets for surface drainage.

**Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

**Dolostone (dolomitic limestone).** A calcium carbonate material containing manganese.

**Drainage class** (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

**Drainage, surface.** Runoff, or surface flow of water, from an area.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

**Eolian soil material.** Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

**Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

**Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

**Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
*Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
*Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Evapotranspiration.** The combined loss of water from a given area, and during a specific period of time, by evaporation from the soil surface and transpiration from plants.

**Excess fines** (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

**Fast intake** (in tables). The rapid movement of water into the soil.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when

light, moisture, temperature, tilth, and other growth factors are favorable.

**Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

**Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Firebreak.** Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

**First bottom.** The normal flood plain of a stream, subject to frequent or occasional flooding.

**Flats.** Nearly level landforms that are smooth, do not have any significant curvature or slope, and have little change in elevation. They occur as transitional areas. Typically, they are about 6 inches lower in elevation than the flatwoods and commonly extend down to depressions that have linear to slightly concave relief.

**Flatwoods** (colloquial). Broad, linear-relief landforms that have slightly convex relief along flats, depressions, and flood plains and have concave relief along rises and knolls.

**Flood plain.** A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

**Fluvial.** Of or pertaining to rivers; produced by river action, as a fluvial plain.

**Forb.** Any herbaceous plant not a grass or a sedge.

**Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.

**Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

**Graded stripcropping.** Growing crops in strips that grade toward a protected waterway.

**Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

**Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

**Gravelly soil material.** Material that is 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

**Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

**Ground water.** Water filling all the unblocked pores of the material below the water table.

**Gully.** A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

**Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

**Hardpan.** A hardened or cemented soil horizon, usually a spodic horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

**Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

**High-residue crops.** Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

**Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions

of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

*O horizon.*—An organic layer of fresh and decaying plant residue.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Soft, consolidated bedrock beneath the soil.

*R layer.*—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

**Increasers.** Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Intake rate.** The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

| | |
|---|---|
| Less than 0.2 | very low |
| 0.2 to 0.4 | low |
| 0.4 to 0.75 | moderately low |
| 0.75 to 1.25 | moderate |
| 1.25 to 1.75 | moderately high |
| 1.75 to 2.5 | high |
| More than 2.5 | very high |

**Intermittent stream.** A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

**Invaders.** On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

**Iron depletions.** Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

**Irrigation.** Application of water to soils to assist in production of crops. Methods of irrigation are:

*Drip (or trickle).*—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

*Sprinkler.*—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

**Knoll.** A small, low, rounded hill rising above adjacent landforms.

**Landform.** Any recognizable physical feature on the earth's surface produced by natural causes and having a characteristic shape and range in composition.

**Landscape.** A collection of related natural landforms, usually the land surface that can be comprehended in a single view.

**Leaching.** The removal of soluble material from soil or other material by percolating water.

**Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Low-residue crops.** Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

**Low strength.** The soil is not strong enough to support loads.

**Masses.** Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

**Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.

**Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.

**Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

**Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.

**Miscellaneous area.** An area that has little or no natural soil and supports little or no vegetation.

**Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.

**Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.

**Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

**Muck.** Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

**Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

**Natric horizon.** A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

**Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

**Nodules.** Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

**Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

**Organic matter.** Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

| | |
|---|---|
| Very low | less than 0.5 percent |
| Low | 0.5 to 1.0 percent |
| Moderately low | 1.0 to 2.0 percent |
| Moderate | 2.0 to 4.0 percent |
| High | 4.0 to 8.0 percent |
| Very high | more than 8.0 percent |

**Pan.** A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

**Parent material.** The unconsolidated organic and mineral material in which soil forms.

**Peat.** Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Pedon.** The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

**Percolation.** The downward movement of water through the soil.

**Percs slowly** (in tables). The slow movement of water through the soil adversely affects the specified use.

**Permeability.** The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

| | |
|---|---|
| Extremely slow | 0.0 to 0.01 inch |
| Very slow | 0.01 to 0.06 inch |
| Slow | 0.06 to 0.2 inch |
| Moderately slow | 0.2 to 0.6 inch |
| Moderate | 0.6 inch to 2.0 inches |
| Moderately rapid | 2.0 to 6.0 inches |
| Rapid | 6.0 to 20 inches |
| Very rapid | more than 20 inches |

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Plinthite.** The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poor filter** (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Poor outlets** (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

**Potential native plant community.** See Climax plant community.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Prescribed burning.** Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Range condition.** The present composition of the plant community on a range site in relation to the potential climax plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

**Rangeland.** Land on which the potential climax vegetation is predominantly grasses, grasslike

plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

**Range site.** An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

| | |
|---|---|
| Ultra acid | less than 3.5 |
| Extremely acid | 3.5 to 4.4 |
| Very strongly acid | 4.5 to 5.0 |
| Strongly acid | 5.1 to 5.5 |
| Moderately acid | 5.6 to 6.0 |
| Slightly acid | 6.1 to 6.5 |
| Neutral | 6.6 to 7.3 |
| Slightly alkaline | 7.4 to 7.8 |
| Moderately alkaline | 7.9 to 8.4 |
| Strongly alkaline | 8.5 to 9.0 |
| Very strongly alkaline | 9.1 and higher |

**Redoximorphic concentrations.** Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

**Redoximorphic depletions.** Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

**Redoximorphic features.** Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

**Reduced matrix.** A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

**Regolith.** The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

**Relief.** The elevations or inequalities of a land surface, considered collectively.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

**Rill.** A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

**Rises.** Landforms that have a broad summit and gently sloping sides rising above, lower wetter land.

**Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

**Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

**Rooting depth** (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Salty water** (in tables). Water that is too salty for consumption by livestock.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

**Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand;

shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

**Seepage** (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

**Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

**Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

**Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

**Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Silica.** A combination of silicon and oxygen. The mineral form is called quartz.

**Silica-sesquioxide ratio.** The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

**Sinkhole.** A depression in the landscape where limestone has been dissolved.

**Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

**Slippage** (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

| | |
|---|---|
| Nearly level | 0 to 2 percent |
| Gently sloping | 2 to 5 percent |
| Moderately sloping | 5 to 8 percent |
| Strongly sloping | 8 to 12 percent |
| Moderately steep | 12 to 20 percent |
| Steep | 20 to 45 percent |
| Very steep | 45 percent and higher |

**Slope** (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

**Slow intake** (in tables). The slow movement of water into the soil.

**Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

**Small stones** (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

| | |
|---|---|
| Very coarse sand | 2.0 to 1.0 |
| Coarse sand | 1.0 to 0.5 |
| Medium sand | 0.5 to 0.25 |
| Fine sand | 0.25 to 0.10 |
| Very fine sand | 0.10 to 0.05 |
| Silt | 0.05 to 0.002 |
| Clay | less than 0.002 |

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Spodic horizon.** A mineral soil horizon that is

characterized by the illuvial accumulation of amorphous materials composed of aluminum and organic carbon with or without iron. The spodic horizon has a certain minimum thickness and a minimum quantity of extractable carbon plus iron plus aluminum in relation to its content of clay.

**Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Stubble mulch.** Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.

**Subsurface layer.** Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

**Summer fallow.** The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

**Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

**Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

**Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

**Terrace.** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

**Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

**Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.

**Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

**Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

**Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

**Unstable fill** (in tables). Risk of caving or sloughing on banks of fill material.

**Upland.** Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Variegation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

**Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

**Weathering.** All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

**Well graded.** Refers to soil material consisting of coarse

grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

**Wilting point (or permanent wilting point).** The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

**Windthrow.** The uprooting and tipping over of trees by the wind.

# Tables

**Table 1.--Temperature and Precipitation**

**(Recorded in the period 1961-90 at Perry, Florida)**

| Month | Temperature | | | | | | Precipitation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2 years in 10 will have-- | | | | 2 years in 10 will have-- | | |
| | Average daily maximum | Average daily minimum | Average daily | Maximum temperature higher than-- | Minimum temperature lower than-- | Average number of growing degree days* | Average | Less than-- | More than-- | Average number of days with 0.10 inch or more |
| | °F | °F | °F | °F | °F | Units | In | In | In | |
| January | 66.0 | 41.0 | 53.5 | 81 | 16 | 426 | 4.13 | 2.09 | 5.91 | 6 |
| February | 68.8 | 42.5 | 55.7 | 83 | 21 | 438 | 4.43 | 2.37 | 6.24 | 6 |
| March | 75.7 | 48.9 | 62.3 | 87 | 27 | 689 | 4.67 | 2.12 | 6.85 | 5 |
| April | 81.8 | 54.0 | 67.9 | 92 | 35 | 833 | 3.50 | 0.90 | 5.57 | 3 |
| May | 87.6 | 61.6 | 74.6 | 96 | 45 | 1,071 | 3.88 | 1.60 | 5.81 | 5 |
| June | 91.4 | 68.1 | 79.7 | 99 | 56 | 1,190 | 6.25 | 3.72 | 8.51 | 8 |
| July | 92.2 | 70.7 | 81.4 | 99 | 53 | 1,281 | 8.48 | 4.75 | 11.79 | 11 |
| August | 92.0 | 70.5 | 81.2 | 98 | 64 | 1,274 | 8.49 | 4.45 | 12.03 | 11 |
| September | 89.9 | 67.4 | 78.7 | 97 | 51 | 1,154 | 5.50 | 2.99 | 7.71 | 7 |
| October | 83.4 | 56.9 | 70.1 | 93 | 33 | 933 | 2.27 | 0.57 | 3.76 | 3 |
| November | 75.9 | 48.8 | 62.3 | 87 | 24 | 663 | 2.74 | 1.50 | 3.82 | 4 |
| December | 69.0 | 42.9 | 56.0 | 83 | 17 | 498 | 3.73 | 1.85 | 5.37 | 5 |
| Yearly: | | | | | | | | | | |
| Average | 81.1 | 56.1 | 68.6 | --- | --- | --- | --- | --- | --- | --- |
| Extreme | 104 | 7 | --- | 101 | 14 | --- | --- | --- | --- | --- |
| Total | --- | --- | --- | --- | --- | 10,450 | 58.06 | 48.20 | 66.91 | 74 |

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

**Table 2.--Freeze Dates in Spring and Fall**

**(Recorded in the period 1961-90 at Jacksonville, Florida)**

| Probability | Temperature | | |
|---|---|---|---|
| | 24°F or lower | 28°F or lower | 32°F or lower |
| Last freezing temperature in spring: | | | |
| 1 year in 10 later than-- | Feb. 27 | Mar. 14 | Mar. 29 |
| 2 years in 10 later than-- | Feb. 13 | Mar. 8 | Mar. 24 |
| 5 years in 10 later than-- | Jan. 28 | Feb. 24 | Mar. 13 |
| First freezing temperature in fall: | | | |
| 1 year in 10 earlier than-- | Nov. 19 | Nov. 4 | Oct. 23 |
| 2 years in 10 earlier than-- | Nov. 28 | Nov. 13 | Oct. 30 |
| 5 years in 10 earlier than-- | Dec. 16 | Dec. 29 | Nov. 13 |

**Table 3.--Growing Season**

**(Recorded in the period 1961-90 at Jacksonville, Florida)**

| Probability | Daily minimum temperature during growing season | | |
|---|---|---|---|
| | Higher than 24°F | Higher than 28°F | Higher than 32°F |
| | Days | Days | Days |
| 9 years in 10 | 284 | 247 | 223 |
| 8 years in 10 | 298 | 258 | 230 |
| 5 years in 10 | 325 | 279 | 244 |
| 2 years in 10 | 361 | 299 | 258 |
| 1 year in 10 | >365 | 310 | 266 |

Table 4.--Acreage and Proportionate Extent of the Soils

| Map symbol | Soil name | Acres | Percent |
|---|---|---|---|
| 3 | Clara and Osier fine sands | 6,846 | 1.0 |
| 5 | Chaires fine sand | 28,900 | 4.3 |
| 6 | Leon fine sand | 68,980 | 10.2 |
| 8 | Meadowbrook fine sand | 1,603 | 0.2 |
| 9 | Sapelo fine sand | 22,080 | 3.3 |
| 10 | Mandarin-Hurricane complex, 0 to 3 percent slopes | 2,948 | 0.4 |
| 12 | Ortega fine sand, 0 to 5 percent slopes | 38,290 | 5.6 |
| 13 | Hurricane fine sand, 0 to 3 percent slopes | 12,321 | 1.8 |
| 14 | Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes | 6,460 | 1.0 |
| 15 | Ridgewood fine sand, 0 to 3 percent slopes | 24,940 | 3.7 |
| 16 | Lutterloh-Ridgewood complex, 0 to 3 percent slopes | 2,369 | 0.3 |
| 17 | Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded | 2,749 | 0.4 |
| 19 | Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes | 5,638 | 0.8 |
| 20 | Melvina-Mandarin complex, 0 to 3 percent slopes | 4,878 | 0.7 |
| 21 | Kershaw fine sand, 0 to 8 percent slopes | 10,810 | 1.6 |
| 22 | Ocilla sand | 1,125 | 0.2 |
| 23 | Melvina-Moriah-Lutterloh complex | 24,950 | 3.7 |
| 24 | Albany sand, 0 to 5 percent slopes | 5,430 | 0.8 |
| 25 | Pottsburg fine sand | 3,676 | 0.5 |
| 26 | Resota-Hurricane complex, 0 to 5 percent slopes | 1,399 | 0.2 |
| 27 | Plummer fine sand | 5,716 | 0.8 |
| 28 | Surrency, Starke, and Croatan soils, depressional | 16,970 | 2.5 |
| 29 | Albany-Surrency, depressional, complex, 0 to 3 percent slopes | 1,801 | 0.3 |
| 30 | Dorovan and Pamlico soils, depressional | 58,890 | 8.7 |
| 33 | Wesconnett, Evergreen, and Pamlico soils, depressional | 33,610 | 5.0 |
| 34 | Clara and Bodiford soils, frequently flooded | 22,860 | 3.4 |
| 35 | Tooles, Meadowbrook, and Wekiva soils, frequently flooded | 11,220 | 1.7 |
| 37 | Tooles and Meadowbrook soils, depressional | 11,840 | 1.7 |
| 38 | Clara and Meadowbrook soils, depressional | 22,070 | 3.3 |
| 40 | Lutterloh fine sand, limestone substratum | 440 | * |
| 41 | Tooles-Meadowbrook complex | 11,230 | 1.7 |
| 45 | Chaires fine sand, limestone substratum | 23,250 | 3.4 |
| 46 | Pits | 1,201 | 0.2 |
| 48 | Wekiva-Tennille-Tooles complex, occasionally flooded | 51,330 | 7.6 |
| 49 | Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes | 3,795 | 0.6 |
| 51 | Tooles-Nutall complex, frequently flooded | 3,267 | 0.5 |
| 52 | Clara, depressional-Clara-Meadowbrook complex, occasionally flooded | 12,280 | 1.8 |
| 53 | Bayvi muck, frequently flooded | 25,040 | 3.7 |
| 54 | Meadowbrook-Tooles-Clara, depressional, complex | 6,050 | 0.9 |
| 55 | Arents, moderately wet, rarely flooded | 234 | * |
| 57 | Sapelo mucky fine sand | 13,540 | 2.0 |
| 58 | Leon mucky fine sand | 6,984 | 1.0 |
| 59 | Arents, sanitary landfill | 116 | * |
| 60 | Chaires, limestone substratum-Meadowbrook, limestone substratum, complex, rarely flooded | 3,124 | 0.5 |
| 61 | Wekiva-Tooles, depressional-Tennille complex, rarely flooded | 18,260 | 2.7 |
| 62 | Tooles-Tennille-Wekiva complex, depressional | 3,108 | 0.5 |
| 63 | Steinhatchee fine sand | 1,418 | 0.2 |
| 64 | Tooles-Wekiva complex | 3,745 | 0.6 |
| 65 | Yellowjacket and Maurepas mucks, frequently flooded | 8,172 | 1.2 |
| 67 | Yellowjacket and Maurepas mucks, depressional | 4,558 | 0.7 |
| 68 | Matmon-Wekiva-Rock outcrop complex, occasionally flooded | 3,544 | 0.5 |
| 69 | Eunola, Goldhead, and Tooles fine sands, commonly flooded | 1,130 | 0.2 |
| 70 | Chiefland-Chiefland, frequently flooded, complex | 380 | * |
| 71 | Leon fine sand, rarely flooded | 3,736 | 0.6 |
| 72 | Chaires fine sand, rarely flooded | 1,784 | 0.3 |
| 73 | Chipley sand, 0 to 5 percent slopes | 1,712 | 0.3 |
| 74 | Mascotte sand | 545 | * |
| | Water | 2,358 | 0.3 |
| | Total | 677,700 | 100.0 |

* Less than 0.1 percent.

**Table 5.--Comprehensive Hydric Soils List**

(All map units are displayed regardless of hydric status. The "hydric soils criteria" indicate the conditions that determine the classification of the map unit component as "hydric" or "nonhydric." These criteria are defined in "Hydric Soils of the United States" (USDA, 1995). See the endnote regarding these columns. Small areas of included soils or miscellaneous areas that are significant to use and management but are too small to show on the soil maps at the original scale may be designated on the soil maps with a spot symbol.)

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 3: Clara and Osier fine sands | | | | | | | | 6,846 |
| | 45% Clara (C) | No | | | | | | |
| | 30% Osier (C) | No | | | | | | |
| | 03% Boulogne (I) | No | | | | | | |
| | 03% Leon (I) | No | | | | | | |
| | 03% Meadowbrook (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Plummer (I) | No | | | | | | |
| | 10% Pottsburg (I) | No | | | | | | |
| | 03% Sapelo (I) | No | | | | | | |
| 5: Chaires fine sand | | | | | | | | 28,639 |
| | 81% Chaires (C) | No | | | | | | |
| | 09% Leon (I) | No | | | | | | |
| | 02% Meadowbrook (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Moriah (I) | No | | | | | | |
| | 02% Pottsburg (I) | No | | | | | | |
| | 02% Steinhatchee (I) | No | | | | | | |
| | 02% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 6: Leon fine sand | | | | | | | | 68,680 |
| | 78% Leon (C) | No | | | | | | |
| | 10% Chaires (I) | No | | | | | | |
| | 04% Pamlico (I) | Yes | Depression | 3 | Yes | No | Yes | |
| | 04% Pottsburg (I) | No | | | | | | |
| | 04% Ridgewood (I) | No | | | | | | |
| 8: Meadowbrook fine sand | | | | | | | | 1,603 |
| | 80% Meadowbrook (C) | No | | | | | | |
| | 06% Chaires (I) | No | | | | | | |
| | 02% Clara (I) | No | | | | | | |
| | 10% Goldhead (I) | No | | | | | | |
| | 02% Meadowbrook (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 9: Sapelo fine sand | | | | | | | | 21,818 |
| | 80% Sapelo (C) | No | | | | | | |
| | 03% Albany (I) | No | | | | | | |
| | 03% Boulogne (I) | No | | | | | | |
| | 08% Leon (I) | No | | | | | | |
| | 03% Meadowbrook (I) | No | | | | | | |
| | 03% Sapelo (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 10: Mandarin-Hurricane complex, 0 to 3 percent slopes | | | | | | | | 2,948 |
| | 62% Mandarin (C) | No | | | | | | |
| | 18% Hurricane (C) | No | | | | | | |
| | 02% Boulogne (I) | No | | | | | | |
| | 02% Leon (I) | No | | | | | | |
| | 02% Lynn Haven (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Ridgewood (I) | No | | | | | | |
| | 02% Sapelo (I) | No | | | | | | |
| 12: Ortega fine sand, 0 to 5 percent slopes | | | | | | | | 38,020 |
| | 78% Ortega (C) | No | | | | | | |
| | 04% Boulogne (I) | No | | | | | | |
| | 05% Kershaw (I) | No | | | | | | |
| | 01% Lynn Haven (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 12% Ridgewood (I) | No | | | | | | |
| 13: Hurricane fine sand, 0 to 3 percent slopes | | | | | | | | 12,079 |
| | 77% Hurricane (C) | No | | | | | | |
| | 13% Leon (I) | No | | | | | | |
| | 02% Lutterloh (I) | No | | | | | | |
| | 02% Mandarin (I) | No | | | | | | |
| | 02% Pottsburg (I) | No | | | | | | |
| 14: Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes | | | | | | | | 6,460 |
| | 30% Chipley (C) | No | | | | | | |
| | 25% Lynn Haven (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 19% Boulogne (C) | No | | | | | | |
| | 04% Clara (I) | No | | | | | | |
| | 02% Clara (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Ortega (I) | No | | | | | | |
| | 08% Osier (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Otela (I) | No | | | | | | |
| | 03% Plummer (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 15: Ridgewood fine sand, 0 to 3 percent slopes | | | | | | | | 24,671 |
| | 77% Ridgewood (C) | No | | | | | | |
| | 07% Albany (I) | No | | | | | | |
| | 04% Hurricane (I) | No | | | | | | |
| | 03% Lutterloh (I) | No | | | | | | |
| | 04% Leon (I) | No | | | | | | |
| | 03% Melvina (I) | No | | | | | | |
| | 02% Ortega (I) | No | | | | | | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 16: Lutterloh-Ridgewood complex, 0 to 3 percent slopes | | | | | | | | 2,369 |
| | 58% Lutterloh (C) | No | | | | | | |
| | 21% Ridgewood (C) | No | | | | | | |
| | 04% Meadowbrook (I) | No | | | | | | |
| | 04% Meadowbrook (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 04% Moriah (I) | No | | | | | | |
| | 04% Oretga (I) | No | | | | | | |
| | 05% Tennille (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 17: Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded | | | | | | | | 2,749 |
| | 29% Ousley (C) | No | | | | | | |
| | 28% Leon (C) | No | | | | | | |
| | 27% Clara (C) | No | | | | | | |
| | 03% Albany (I) | No | | | | | | |
| | 03% Chaires (I) | No | | | | | | |
| | 06% Lutterloh (I) | No | | | | | | |
| | 03% Moriah (I) | No | | | | | | |
| | 01% Seaboard (I) | No | | | | | | |
| 19: Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes | | | | | | | | 5,638 |
| | 49% Otela (C) | No | | | | | | |
| | 24% Oretga (C) | No | | | | | | |
| | 23% Lutterloh (C) | No | | | | | | |
| | 01% Hurricane (I) | No | | | | | | |
| | 01% Ocilla (I) | No | | | | | | |
| | 01% Plummer (I) | No | | | | | | |
| | 01% Starke (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 20: Melvina-Mandarin complex, 0 to 3 percent slopes | | | | | | | | 4,878 |
| | 40% Melvina (C) | No | | | | | | |
| | 38% Mandarin (C) | No | | | | | | |
| | 05% Chaires (I) | No | | | | | | |
| | 06% Hurricane (I) | No | | | | | | |
| | 04% Leon (I) | No | | | | | | |
| | 04% Lutterloh (I) | No | | | | | | |
| | 03% Ridgewood (I) | No | | | | | | |
| 21: Kershaw fine sand, 0 to 8 percent slopes | | | | | | | | 10,655 |
| | 81% Kershaw (C) | No | | | | | | |
| | 11% Boulogne (I) | No | | | | | | |
| | 05% Ortega (I) | No | | | | | | |
| | 03% Ridgewood (I) | No | | | | | | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 22: Ocilla fine sand | | | | | | | | 1,125 |
| | 81% Ocilla (C) | No | | | | | | |
| | 11% Albany (I) | No | | | | | | |
| | 08% Ridgewood (I) | No | | | | | | |
| 23: Melvina-Moriah-Lutterloh complex | | | | | | | | 24,764 |
| | 44% Melvina (C) | No | | | | | | |
| | 18% Moriah (C) | No | | | | | | |
| | 16% Lutterloh (C) | No | | | | | | |
| | 12% Bushnell (I) | No | | | | | | |
| | 02% Chaires (I) | No | | | | | | |
| | 04% Meadowbrook (I) | No | | | | | | |
| | 02% Ridgewood (I) | No | | | | | | |
| | 02% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 24: Albany fine sand, 0 to 5 percent slopes | | | | | | | | 5,430 |
| | 76% Albany (C) | No | | | | | | |
| | 09% Chaires (I) | No | | | | | | |
| | 02% Lynn Haven (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Melvina (I) | No | | | | | | |
| | 04% Ocilla (I) | No | | | | | | |
| | 07% Plummer (I) | No | | | | | | |
| 25: Pottsburg fine sand | | | | | | | | 3,676 |
| | 77% Pottsburg (C) | No | | | | | | |
| | 12% Boulogne (I) | No | | | | | | |
| | 05% Leon (I) | No | | | | | | |
| | 02% Mandarin (I) | No | | | | | | |
| | 02% Meadowbrook (I) | No | | | | | | |
| | 01% Osier (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 01% Moriah (I) | No | | | | | | |
| 26: Resota-Hurricane complex, 0 to 5 percent slopes | | | | | | | | 1,399 |
| | 67% Resota (C) | No | | | | | | |
| | 20% Hurricane (C) | No | | | | | | |
| | 02% Leon (I) | No | | | | | | |
| | 03% Mandarin (I) | No | | | | | | |
| | 03% Ortega (I) | No | | | | | | |
| | 05% Ridgewood (I) | No | | | | | | |
| 27: Plummer fine sand | | | | | | | | 5,716 |
| | 47% Plummer (C) | No | | | | | | |
| | 30% Plummer (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 07% Plummer (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Mascotte (I) | No | | | | | | |
| | 04% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Sapelo (I) | No | | | | | | |
| | 04% Surrency (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 28: | | | | | | | | |
| Surrency, Starke, and Croatan soils, depressional | | | | | | | | 16,727 |
| | 39% Surrency (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 27% Starke (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 21% Croatan (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 06% Lynn Haven (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Mascotte (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Plummer (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Pottsburg (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 29: | | | | | | | | |
| Albany-Surrency, depressional, complex, 0 to 3 percent slopes | | | | | | | | 1,801 |
| | 45% Albany (C) | No | | | | | | |
| | 38% Surrency (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 08% Plummer (I) | No | | | | | | |
| | 06% Plummer (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Sapelo (I) | No | | | | | | |
| 30: | | | | | | | | |
| Dorovan and Pamlico soils, depressional | | | | | | | | 58,589 |
| | 56% Dorovan (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 32% Pamlico (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Clara (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Evergreen (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Lynn Haven (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Sapelo (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 33: | | | | | | | | |
| Wesconnett, Evergreen, and Pamlico soils, depressional | | | | | | | | 33,341 |
| | 41% Wesconnett (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 25% Evergreen (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 20% Pamlico (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Chaires (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 01% Clara (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 01% Pottsburg (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 09% Pottsburg (I) | No | | | | | | |
| | 01% Surrency (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 34: | | | | | | | | |
| Clara and Bodiford soils, frequently flooded | | | | | | | | 22,619 |
| | 58% Clara (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 21% Bodiford (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 04% Evergreen (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 02% Leon (I) | No | | | | | | |
| | 04% Meadowbrook (I) | No | | | | | | |
| | 05% Nutall (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 35: Tooles, Meadowbrook, and Wekiva Soils, frequently flooded | | | | | | | | 10,969 |
| | 40% Tooles (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 28% Meadowbrook (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 23% Wekiva (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 03% Clara (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 01% Nutall (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 05% Tennille (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| 37: Tooles and Meadowbrook soils, depressional | | | | | | | | 11,590 |
| | 48% Tooles (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 36% Meadowbrook (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Pamlico (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Surrency (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Tennille (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 07% Wekiva (I) | No | | | | | | |
| 38: Clara and Meadowbrook soils, depressional | | | | | | | | 21,808 |
| | 44% Clara (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 32% Meadowbrook (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 06% Chaires (I) | No | | | | | | |
| | 03% Croatan (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 05% Leon (I) | No | | | | | | |
| | 07% Starke (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 40: Lutterloh fine sand, limestone substratum | | | | | | | | 440 |
| | 80% Lutterloh (C) | No | | | | | | |
| | 10% Chaires (I) | No | | | | | | |
| | 01% Leon (I) | No | | | | | | |
| | 04% Seaboard (I) | No | | | | | | |
| | 04% Tooles (I) | No | | | | | | |
| | 01% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 41: Tooles-Meadowbrook complex | | | | | | | | 10,912 |
| | 48% Tooles (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 32% Meadowbrook (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Chaires (I) | No | | | | | | |
| | 07% Clara (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Clara (I) | No | | | | | | |
| | 01% Moriah (I) | No | | | | | | |
| | 03% Tennille (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 45: Chaires fine sand, limestone substratum | | | | | | | | 22,891 |
| | 77% Chaires (C) | No | | | | | | |
| | 02% Leon (I) | No | | | | | | |
| | 03% Meadowbrook (I) | No | | | | | | |
| | 06% Steinhatchee (I) | No | | | | | | |
| | 05% Tooles (I) | No | | | | | | |
| | 03% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 46: Pits | | | | | | | | 1,201 |
| | 75% Pits (C) | No | | | | | | |
| | 12% Pits (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 11% Pits (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Leon (I) | No | | | | | | |
| 48: Wekiva-Tennille-Tooles complex, occasionally flooded | | | | | | | | 51,151 |
| | 44% Wekiva (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 28% Tennille (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 16% Tooles (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Clara (I) | No | | | | | | |
| | 02% Matmon (I) | No | | | | | | |
| | 02% Melvina (I) | No | | | | | | |
| | 02% Steinhatchee (I) | No | | | | | | |
| | 03% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 49: Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes | | | | | | | | 3,795 |
| | 28% Seaboard (C) | No | | | | | | |
| | 25% Bushnell (C) | No | | | | | | |
| | 23% Matmon (C) | No | | | | | | |
| | 02% Chaires (I) | No | | | | | | |
| | 03% Lutterloh (I) | No | | | | | | |
| | 10% Moriah (I) | No | | | | | | |
| | 02% Otela (I) | No | | | | | | |
| | 07% Wekiva (I) | No | | | | | | |
| 51: Tooles-Nutall complex, frequently flooded | | | | | | | | |
| | 60% Tooles (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | 1,895 |
| | 30% Nutall (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | 1,372 |
| | 03% Goldhead (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Starke (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 04% Tennille (I) | Yes | Flat | 2B1 | Yes | No | No | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 52: | | | | | | | | |
| Clara, depressional-Clara-Meadowbrook complex, occasionally flooded | | | | | | | | 12,007 |
| | 30% Clara (C) | Yes | Depression | 2B1 | Yes | No | Yes | |
| | 29% Clara (C) | No | | | | | | |
| | 12% Meadowbrook (C) | No | | | | | | |
| | 08% Meadowbrook (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Hurricane (I) | No | | | | | | |
| | 02% Leon (I) | No | | | | | | |
| | 02% Lutterloh (I) | No | | | | | | |
| | 05% Pottsburg (I) | No | | | | | | |
| | 03% Pottsburg (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 53: | | | | | | | | |
| Bayvi muck, frequently flooded | | | | | | | | 24,749 |
| | 81% Bayvi (C) | Yes | Salt marsh | 2B1,4 | Yes | Yes | No | |
| | 10% Leon (I) | Yes | Salt marsh | 2B1,4 | Yes | Yes | No | |
| | 05% Nutall (I) | Yes | Salt marsh | 2B1,4 | Yes | Yes | No | |
| | 04% Tennille (I) | Yes | Salt marsh | 2B1,4 | Yes | Yes | No | |
| 54: | | | | | | | | |
| Meadowbrook-Tooles-Clara, depressional, complex | | | | | | | | 6,050 |
| | 32% Meadowbrook (C) | No | | | | | | |
| | 30% Tooles (C) | No | | | | | | |
| | 20% Clara (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Chaires (I) | No | | | | | | |
| | 06% Goldhead (I) | No | | | | | | |
| | 02% Meadowbrook (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Tennille (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 55: | | | | | | | | |
| Arents, moderately wet, rarely flooded | | | | | | | | 234 |
| | 95% Arents (C) | No | | | | | | |
| | 04% Leon (I) | No | | | | | | |
| | 01% Chaires (I) | No | | | | | | |
| 57: | | | | | | | | |
| Sapelo fine sand | | | | | | | | 13,283 |
| | 81% Sapelo (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 01% Evergreen (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Leon (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Leon (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 04% Mascotte (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 05% Pamlico (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 58: | | | | | | | | |
| Leon mucky fine sand | | | | | | | | 6,984 |
| | 90% Leon (C) | Yes | Flat | 2B1 | Yes | No | No | |
| | 01% Boulogne (I) | No | | | | | | |
| | 01% Evergreen (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 01% Lynn Haven (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 03% Pamlico (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 04% Sapelo (I) | Yes | Flat | 2B1 | Yes | No | No | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 59: | | | | | | | | |
| Arents, sanitary landfill | | | | | | | | 116 |
| | 95% Arents (C) | No | | | | | | |
| | 05% Arents (I) | No | | | | | | |
| 60: | | | | | | | | |
| Chaires, limestone substratum-Meadowbrook limestone substratum, complex, rarely flooded | | | | | | | | 3,124 |
| | 60% Chaires (C) | No | | | | | | |
| | 19% Meadowbrook (C) | No | | | | | | |
| | 02% Chaires (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 03% Clara (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 11% Leon (I) | No | | | | | | |
| | 05% Meadowbrook (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 61: | | | | | | | | |
| Wekiva-Tooles, depressional-Tennille, complex, rarely flooded | | | | | | | | 17,921 |
| | 43% Wekiva (C) | No | | | | | | |
| | 25% Tooles (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 12% Tennille (C) | No | | | | | | |
| | 02% Chaires (I) | No | | | | | | |
| | 02% Meadowbrook (I) | No | | | | | | |
| | 09% Steinhatchee (I) | No | | | | | | |
| | 05% Tooles (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 02% Wekiva (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| 62: | | | | | | | | |
| Tooles-Tennille-Wekiva complex, depressional | | | | | | | | 3,108 |
| | 45% Tooles (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 25% Tennille (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 25% Wekiva (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 05% Goldhead (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 63: | | | | | | | | |
| Steinhatchee fine sand | | | | | | | | 1,418 |
| | 80% Steinhatchee (C) | No | | | | | | |
| | 10% Chaires (I) | No | | | | | | |
| | 05% Tooles (I) | No | | | | | | |
| | 05% Wekiva (I) | No | | | | | | |
| 64: | | | | | | | | |
| Tooles-Wekiva complex | | | | | | | | 3,745 |
| | 63% Tooles (C) | No | | | | | | |
| | 27% Wekiva (C) | No | | | | | | |
| | 05% Meadowbrook (I) | No | | | | | | |
| | 05% Mariah (I) | No | | | | | | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 65: | | | | | | | | |
| Yellowjacket and Maurepas mucks, frequently flooded | | | | | | | | 8172 |
| | 45% Yellowjacket (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 45% Maurepas (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 05% Pamlico (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 05% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 67: | | | | | | | | |
| Yellowjacket and Maurepas mucks, depressional | | | | | | | | 4,558 |
| | 45% Yellowjacket (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 40% Maurepas (C) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 05% Chaires (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 05% Pamlico (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 05% Meadowbrook (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 68: | | | | | | | | |
| Matmon-Wekiva-Rock outcrop complex, occasionally flooded | | | | | | | | 3,544 |
| | 40% Matmon (C) | No | | | | | | |
| | 35% Wekiva (C) | No | | | | | | |
| | 14% Rock outcrop (C) | No | | | | | | |
| | 06% Steinhatchee (I) | No | | | | | | |
| | 05% Tennille (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 69: | | | | | | | | |
| Eunola, Goldhead, and Tooles fine sands, commonly flooded | | | | | | | | 1,130 |
| | 49% Eunola (C) | No | | | | | | |
| | 20% Goldhead (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 11% Tooles (C) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 08% Alluvial soils (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 01% Hurricane (I) | No | | | | | | |
| | 03% Moriah (I) | No | | | | | | |
| | 03% Nutall (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| | 05% Wekiva (I) | Yes | Flood plain | 2B1,4 | Yes | Yes | No | |
| 70: | | | | | | | | |
| Chiefland-Chiefland, frequently flooded, complex | | | | | | | | 380 |
| | 40% Chiefland (C) | No | | | | | | |
| | 35% Chiefland (C) | No | | | | | | |
| | 05% Bushnell (I) | No | | | | | | |
| | 05% Matmon (I) | No | | | | | | |
| | 05% Moriah (I) | No | | | | | | |
| | 05% Ridgewood (I) | No | | | | | | |
| | 05% Seaboard (I) | No | | | | | | |

See footnote at end of table.

Table 5.--Comprehensive Hydric Soils List--Continued

| Map symbol and map unit name | Components(C) and inclusions(I) | Hydric | Local landform | Hydric soils criteria | | | | Acres |
|---|---|---|---|---|---|---|---|---|
| | | | | Hydric criteria code* | Meets saturation criteria | Meets flooding criteria | Meets ponding criteria | |
| 71: Leon fine sand, rarely flooded | | | | | | | | 3,736 |
| | 78% Leon (C) | No | | | | | | |
| | 06% Chaires (I) | No | | | | | | |
| | 04% Osier (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Pottsburg (I) | No | | | | | | |
| | 04% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Wekiva (I) | Yes | Flat | 2B1 | Yes | No | No | |
| 72: Chaires fine sand, rarely flooded | | | | | | | | 1,784 |
| | 80% Chaires (C) | No | | | | | | |
| | 02% Chaires (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Chaires (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 02% Meadowbrook (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 02% Meadowbrook (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |
| | 04% Tooles (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 04% Steinhatchee (I) | No | | | | | | |
| | 04% Wekiva (I) | No | | | | | | |
| 73: Chipley fine sand, 0 to 5 percent slopes | | | | | | | | 1,712 |
| | 77% Chipley (C) | No | | | | | | |
| | 10% Albany (I) | No | | | | | | |
| | 02% Boulogne (I) | No | | | | | | |
| | 05% Hurricane (I) | No | | | | | | |
| | 03% Lynn Haven (I) | No | | | | | | |
| | 03% Pottsburg (I) | No | | | | | | |
| 74: Mascotte sand | | | | | | | | 545 |
| | 80% Mascotte (C) | No | | | | | | |
| | 03% Ocilla (I) | No | | | | | | |
| | 02% Osier (I) | Yes | Flat | 2B1 | Yes | No | No | |
| | 06% Plummer (I) | No | | | | | | |
| | 06% Sapelo (I) | No | | | | | | |
| | 03% Surrency (I) | Yes | Depression | 2B1,3 | Yes | No | Yes | |

* Criteria codes and definitions for hydric soils:

1. All Histosols, except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
   a. Somewhat poorly drained with a water table equal to 0.0 feet from the surface during the growing season, or
   b. Poorly drained or very poorly drained and have either:
      (1) water table equal to 0.0 feet during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches, or for other soils
      (2) water table at less than or equal to 0.5 foot from the surface during the growing season if permeability is equal to or greater than 6.0 inches per hour in all layers within 20 inches, or
      (3) water table at less than or equal to 1.0 foot from the surface during the growing season if permeability is less than 6.0 inches per hour in any layer within 20 inches, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.

Table 6.--Woodland Management and Productivity

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available.)

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Wind-throw hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: | | | | | | | | | | | |
| Osier | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 55 | 1.0 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 69 | 77 | | | |
| Clara | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 55 | 1.0 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 69 | 77 | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 5 Chaires | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 63 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | loblolly pine. |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| 6 Leon | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 62 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 60 | 1.2 | loblolly pine. |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| 8 Meadowbrook | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 57 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 88 | 11 | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| 9 Sapelo | 7W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 63 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | loblolly pine. |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| 10: | | | | | | | | | | | |
| Mandarin | 8S | Moderate | Severe | Slight | Moderate | Slash pine | --- | --- | 50 | 0.8 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 47 | 0.7 | loblolly pine, |
| | | | | | | Longleaf pine | 60 | 56 | | | longleaf pine. |
| | | | | | | Live oak | --- | --- | | | |
| Hurricane | 11W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | loblolly pine, |
| | | | | | | Longleaf pine | 75 | 88 | | | longleaf pine. |
| | | | | | | Blackjack oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| 12 Ortega | 10S | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 55 | 1.0 | loblolly pine, |
| | | | | | | Longleaf pine | 70 | 79 | | | longleaf pine. |
| | | | | | | Blackjack oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13--Hurricane | 11W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | |
| | | | | | | Longleaf pine | 75 | 88 | | | |
| | | | | | | Blackjack oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| 14: | | | | | | | | | | | |
| Chipley | 8W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 80 | 101 | | | |
| | | | | | | Pond pine | --- | --- | | | |
| | | | | | | Blackgum | --- | --- | | | |
| Lynn Haven. | | | | | | | | | | | |
| Boulogne | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 58 | 1.1 | Slash pine. |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| 15--Ridgewood | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 74 | 86 | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| 16: | | | | | | | | | | | |
| Lutterloh | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 67 | 1.5 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 70 | 1.6 | |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| Ridgewood | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 74 | 86 | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| 17: | | | | | | | | | | | |
| Ousley | 8W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 74 | 86 | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Blackgum | --- | --- | | | |
| | | | | | | Red maple | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17: | | | | | | | | | | | |
| Leon | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 62 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 60 | 1.2 | loblolly pine. |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| | | | | | | Sweet gum | --- | --- | | | |
| | | | | | | Red maple | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Black gum | --- | --- | | | |
| Clara | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 55 | 1.0 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 69 | 77 | | | |
| 19: | | | | | | | | | | | |
| Otela | 10S | Moderate | Severe | Slight | Moderate | Slash pine | --- | --- | 60 | 1.2 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | loblolly pine, |
| | | | | | | Longleaf pine | 80 | --- | | | longleaf pine. |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Black cherry | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| Ortega | 10S | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 55 | 1.0 | loblolly pine, |
| | | | | | | Longleaf pine | 70 | 79 | | | longleaf pine. |
| | | | | | | Blackjack oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| Lutterloh | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 67 | 1.5 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 70 | 1.6 | loblolly pine, |
| | | | | | | Longleaf pine | 65 | 67 | | | longleaf pine. |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 20: | | | | | | | | | | | |
| Melvina | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 55 | 1.0 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | loblolly pine. |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| Mandarin | 8S | Moderate | Severe | Slight | Moderate | Slash pine | --- | --- | 50 | 0.8 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 47 | 0.7 | loblolly pine, |
| | | | | | | Longleaf pine | 60 | 56 | | | longleaf pine. |
| | | | | | | Live oak | --- | --- | | | |
| 21-Kershaw | 8S | Moderate | Severe | Slight | Slight | Sand pine | 75 | 63 | | | Sand pine, |
| | | | | | | Longleaf pine | 55 | 45 | | | longleaf pine. |
| | | | | | | Slash pine | --- | --- | 40 | 0.3 | |
| 22-Ocilla | 8W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 70 | 1.6 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 73 | 1.7 | loblolly pine, |
| | | | | | | Longleaf pine | 77 | 93 | | | longleaf pine. |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23: | | | | | | | | | | | |
| Melvina | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 55 | 1.0 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | loblolly pine, |
| | | | | | | Longleaf pine | 65 | 79 | | | longleaf pine. |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| Moriah | 11S | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 62 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 65 | 1.4 | loblolly pine. |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Hickory | --- | --- | | | |
| | | | | | | Sweet gum | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| Lutterloh | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 67 | 1.5 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 70 | 1.6 | loblolly pine, |
| | | | | | | Longleaf pine | 65 | 67 | | | longleaf pine. |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 24--Albany | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 68 | 1.5 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 69 | 1.5 | loblolly pine, |
| | | | | | | Longleaf pine | 80 | 101 | | | longleaf pine. |
| 25--Pottsburg | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| 26: | | | | | | | | | | | |
| Resota | 8S | Moderate | Severe | Slight | Moderate | Slash pine | --- | --- | 60 | 1.2 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 58 | 1.1 | loblolly pine, |
| | | | | | | Longleaf pine | 65 | 67 | | | longleaf pine, |
| | | | | | | Sand pine | 60 | 42 | | | sand pine. |
| | | | | | | Sand live oak | --- | --- | | | |
| Hurricane | 11W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | loblolly pine, |
| | | | | | | Longleaf pine | 75 | 88 | | | longleaf pine. |
| | | | | | | Blackjack oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| 27--Plummer | 11W | Severe | Severe | Slight | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine | --- | --- | 56 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| 29: | | | | | | | | | | | |
| Albany | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 68 | 1.5 | Slash pine, |
| | | | | | | Loblolly pine | --- | --- | 69 | 1.5 | loblolly pine, |
| | | | | | | Longleaf pine | 80 | 101 | | | longleaf pine. |
| Surrency. | | | | | | | | | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 40--Lutterloh | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 67 | 1.5 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 70 | 1.6 | |
| | | | | | | Longleaf pine | 65 | 71 | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| | | | | | | Eastern redcedar | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Hickory | --- | --- | | | |
| 45--Chaires | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 63 | 1.3 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 49: | | | | | | | | | | | |
| Seaboard | 10S | Moderate | Moderate | Moderate | Moderate | Slash pine | --- | --- | 57 | 1.0 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 55 | 1.0 | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Hickory | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| Bushnell | 11W | Moderate | Severe | Severe | Moderate | Slash pine | --- | --- | 58 | 1.1 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 60 | 1.2 | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Southern magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| Matmon | 9W | Moderate | Moderate | Severe | Moderate | Slash pine | --- | --- | 56 | 1.0 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 58 | 1.1 | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| 52: | | | | | | | | | | | |
| Clara, depressional. | | | | | | | | | | | |
| Clara | 11W | Severe | Severe | Slight | Severe | Slash pine | --- | --- | 55 | 1.0 | Slash pine[4], loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 53 | 0.9 | |
| | | | | | | Longleaf pine | 69 | 78 | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Red maple | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Blackgum | --- | --- | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns | | | | Potential productivity | | | | | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | |
| 52: | | | | | | | | | | | |
| Meadowbrook---- | 11W | Severe | Severe | Slight | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 57 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine------- | 88 | 119 | | | |
| | | | | | | Blackgum------------ | --- | --- | | | |
| | | | | | | Laurel oak---------- | --- | --- | | | |
| | | | | | | Red maple----------- | --- | --- | | | |
| | | | | | | Sweetgum------------ | --- | --- | | | |
| | | | | | | Water oak----------- | --- | --- | | | |
| 54: | | | | | | | | | | | |
| Tooles--------- | 11W | Severe | Moderate | Moderate | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 58 | 1.1 | loblolly pine[4]. |
| | | | | | | Cabbage palm-------- | --- | --- | | | |
| | | | | | | Laurel oak---------- | --- | --- | | | |
| | | | | | | Sweetgum------------ | --- | --- | | | |
| | | | | | | Sweetbay------------ | --- | --- | | | |
| | | | | | | American elm-------- | --- | --- | | | |
| | | | | | | Live oak------------ | --- | --- | | | |
| Meadowbrook---- | 11W | Severe | Severe | Slight | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 57 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine------- | 88 | 119 | | | |
| | | | | | | Live oak------------ | --- | --- | | | |
| | | | | | | Water oak----------- | --- | --- | | | |
| Clara. | | | | | | | | | | | |
| 60: | | | | | | | | | | | |
| Chaires-------- | 10W | Moderate | Moderate | Slight | Moderate | Slash pine---------- | --- | --- | 63 | 1.3 | Slash pine, |
| | | | | | | Loblolly pine------- | --- | --- | 61 | 1.2 | loblolly pine. |
| | | | | | | Longleaf pine------- | 70 | 79 | | | |
| | | | | | | Water oak----------- | --- | --- | | | |
| | | | | | | Laurel oak---------- | --- | --- | | | |
| Meadowbrook---- | 11W | Severe | Severe | Slight | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 56 | 1.0 | loblolly pine[4]. |
| | | | | | | Longleaf pine------- | 90 | 124 | | | |
| | | | | | | Live oak------------ | --- | --- | | | |
| | | | | | | Water oak----------- | --- | --- | | | |
| 61: | | | | | | | | | | | |
| Wekiva--------- | 8W | Severe | Severe | Severe | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 59 | 1.1 | loblolly pine[4]. |
| | | | | | | Laurel oak---------- | --- | --- | | | |
| | | | | | | Southern redcedar--- | --- | --- | | | |
| | | | | | | Sweetgum------------ | --- | --- | | | |
| | | | | | | Magnolia------------ | --- | --- | | | |
| Tooles. | | | | | | | | | | | |
| Tennille------- | 8W | Severe | Severe | Severe | Severe | Slash pine---------- | --- | --- | 58 | 1.1 | Slash pine[4], |
| | | | | | | Loblolly pine------- | --- | --- | 56 | 1.0 | loblolly pine[4]. |
| | | | | | | Water oak----------- | --- | --- | | | |
| | | | | | | Southern redcedar--- | --- | --- | | | |
| | | | | | | Sweetgum------------ | --- | --- | | | |
| | | | | | | Cabbage palm-------- | --- | --- | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Wind-throw hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 63--Steinhatchee | 11W | Moderate | Moderate | Moderate | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 64: | | | | | | | | | | | |
| Tooles | 11W | Severe | Moderate | Moderate | Severe | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 58 | 1.1 | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Sweetbay | --- | --- | | | |
| | | | | | | American elm | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| Wekiva | 8W | Severe | Severe | Severe | Severe | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 59 | 1.1 | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Magnolia | --- | --- | | | |
| 68: | | | | | | | | | | | |
| Matmon | 9W | Moderate | Moderate | Severe | Moderate | Slash pine | --- | --- | 56 | 1.0 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 58 | 0.9 | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Magnolia | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| Wekiva | 8W | Severe | Severe | Severe | Severe | Slash pine | --- | --- | 58 | 1.1 | Slash pine[4], loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 59 | 1.1 | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Southern redcedar | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Magnolia | --- | --- | | | |
| Rock outcrop. | | | | | | | | | | | |
| 69: | | | | | | | | | | | |
| Eunola | 10W | Moderate | Slight | Slight | Moderate | Slash pine | --- | --- | 62 | 1.3 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 65 | 1.4 | |
| | | | | | | Sweetgum | --- | --- | | | |
| | | | | | | Yellow-poplar | --- | --- | | | |
| Goldhead. | | | | | | | | | | | |
| Tooles. | | | | | | | | | | | |

See footnotes at end of table.

Table 6.--Woodland Management and Productivity--Continued

| Soil name and map symbol | Ordination symbol | Management concerns: Equipment limitation | Seedling mortality | Windthrow hazard | Plant competition | Potential productivity: Common trees | Site index | Volume[1] | Site quality[2] | Productivity[3] | Trees to plant |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 70: | | | | | | | | | | | |
| Chiefland | 11S | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 56 | 1.0 | Slash pine, loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 57 | 1.0 | |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| | | | | | | Hickory | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| Chiefland, frequently flooded | 11S | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 56 | 1.0 | Slash pine, loblolly pine[4]. |
| | | | | | | Loblolly pine | --- | --- | 57 | 1.0 | |
| | | | | | | Longleaf pine | 65 | 67 | | | |
| | | | | | | Hickory | --- | --- | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Sweetgum | --- | --- | | | |
| 71 Leon | 8W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 62 | 1.3 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 60 | 1.2 | |
| | | | | | | Longleaf pine | 60 | 56 | | | |
| | | | | | | Live oak | --- | --- | | | |
| | | | | | | Water oak | --- | --- | | | |
| 72 Chaires | 10W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 63 | 1.3 | Slash pine, loblolly pine. |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | |
| | | | | | | Longleaf pine | 70 | 79 | | | |
| | | | | | | Water oak | --- | --- | | | |
| | | | | | | Laurel oak | --- | --- | | | |
| | | | | | | Cabbage palm | --- | --- | | | |
| 73 Chipley | 11S | Moderate | Slight | Slight | Moderate | Slash pine | --- | --- | 65 | 1.4 | Slash pine, loblolly pine, longleaf pine. |
| | | | | | | Loblolly pine | --- | --- | 62 | 1.3 | |
| | | | | | | Longleaf pine | 80 | 101 | | | |
| | | | | | | Post oak | --- | --- | | | |
| | | | | | | Turkey oak | --- | --- | | | |
| | | | | | | Blackjack oak | --- | --- | | | |
| 74 Mascotte | 11W | Moderate | Moderate | Slight | Moderate | Slash pine | --- | --- | 63 | 1.3 | Slash pine. |
| | | | | | | Loblolly pine | --- | --- | 61 | 1.2 | |
| | | | | | | Longleaf pine | 70 | 79 | | | |

[1] Volume is the average yearly growth in cubic feet per acre based on a 50-year average of the corresponding site index.

[2] Site quality estimates for slash pine are on a 25-year basis.

[3] Productivity is expressed as the average annual number of cords per acre based on a 25-year average of the corresponding site quality.

[4] Adequate surface drainage or bedding is needed to regenerate the forest stand through the planting of trees and to obtain potential productivity.

Table 7.--Land Capability Classes and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

| Soil name and map symbol | Land capability | Bahiagrass | Corn | Improved bermudagrass | Tobacco | Watermelons |
|---|---|---|---|---|---|---|
| | | AUM* | Bu | AUM* | Lbs | Tons |
| 3: | | | | | | |
| Clara | IVw | 5.0 | --- | 6.0 | --- | --- |
| Osier | Vw | 5.0 | --- | --- | --- | --- |
| 5, Chaires | IVw | 8.0 | 50 | --- | --- | --- |
| 6, Leon | IVw | 7.5 | 50 | 9.0 | --- | --- |
| 8, Meadowbrook | IVw | 5.0 | --- | 6.0 | --- | --- |
| 9, Sapelo | IIIw | 7.5 | 50 | --- | --- | --- |
| 10: | | | | | | |
| Mandarin | VIs | 6.0 | --- | --- | --- | --- |
| Hurricane | IIIw | 7.0 | --- | 8.0 | --- | --- |
| 12, Ortega | IIIs | 6.0 | --- | --- | --- | --- |
| 13, Hurricane | IIIw | 7.0 | --- | 8.0 | --- | --- |
| 14: | | | | | | |
| Chipley | IIIs | 7.5 | 50 | 8.0 | 2,000 | 5.0 |
| Lynn Haven | VIIw | --- | --- | --- | --- | --- |
| Boulogne | IIIw | 8.5 | 60 | 8.5 | --- | --- |
| 15, Ridgewood | IVs | 7.0 | --- | --- | --- | --- |
| 16: | | | | | | |
| Lutterloh | IIIw | 6.5 | 65 | 7.0 | 2,100 | 11.0 |
| Ridgewood | IVs | 7.0 | --- | --- | --- | --- |
| 17: | | | | | | |
| Ousley | IIIw | 7.5 | 50 | 7.5 | --- | --- |
| Leon | IVw | 7.5 | 50 | 9.0 | --- | --- |
| Clara | VIw | --- | --- | --- | --- | --- |
| 19: | | | | | | |
| Otela | IIIs | 6.5 | 35 | 7.0 | --- | 5.0 |
| Ortega | IIIs | 6.0 | --- | --- | --- | --- |
| Lutterloh | IIIw | 6.5 | 65 | 7.0 | 2,000 | 11.0 |

See footnote at end of table.

Table 7.--Land Capability Classes and Yields per Acre of Crops and Pasture--Continued

| Soil name and map symbol | Land capability | Bahiagrass | Corn | Improved bermudagrass | Tobacco | Watermelons |
|---|---|---|---|---|---|---|
| | | AUM* | Bu | AUM* | Lbs | Tons |
| 20: | | | | | | |
| Melvina | IVs | 6.5 | --- | --- | --- | --- |
| Mandarin | VIs | 6.5 | --- | --- | --- | --- |
| 21--Kershaw | VIIs | 3.5 | --- | 3.5 | --- | --- |
| 22--Ocilla | IIIw | 7.5 | 75 | 8.5 | 2,600 | --- |
| 23: | | | | | | |
| Melvina | IVs | 6.5 | --- | --- | --- | --- |
| Moriah | IIIw | 6.5 | 65 | 7.0 | 2,100 | 11.0 |
| Lutterloh | IIIw | 6.5 | 65 | 7.0 | 2,100 | 11.0 |
| 24--Albany | IIIw | 6.5 | 65 | 7.0 | 2,100 | --- |
| 25--Pottsburg | IVw | 7.0 | --- | 7.5 | --- | --- |
| 26: | | | | | | |
| Resota | VIs | 5.0 | --- | --- | --- | --- |
| Hurricane | IIIw | 7.0 | --- | 8.0 | --- | --- |
| 27--Plummer | IVw | 5.0 | --- | 6.0 | --- | --- |
| 28--Surrency, Starke, and Croatan | VIIw | --- | --- | --- | --- | --- |
| 29: | | | | | | |
| Albany | IIIw | 6.5 | 65 | 7.0 | 2,000 | --- |
| Surrency | VIIw | --- | --- | --- | --- | --- |
| 30--Dorovan and Pamlico | VIIw | --- | --- | --- | --- | --- |
| 33--Wesconnett, Evergreen, and Pamlico | VIIw | --- | --- | --- | --- | --- |
| 34: | | | | | | |
| Clara | VIw | --- | --- | --- | --- | --- |
| Bodiford | VIIw | --- | --- | --- | --- | --- |
| 35: | | | | | | |
| Tooles | VIw | --- | --- | --- | --- | --- |
| Meadowbrook | VIw | --- | --- | --- | --- | --- |
| Wekiva | Vw | --- | --- | --- | --- | --- |

See footnote at end of table.

Table 7.--Land Capability Classes and Yields per Acre of Crops and Pasture--Continued

| Soil name and map symbol | Land capability | Bahiagrass | Corn | Improved bermudagrass | Tobacco | Watermelons |
|---|---|---|---|---|---|---|
| | | AUM* | Bu | AUM* | Lbs | Tons |
| 37---------- Tooles and Meadowbrook | VIIw | --- | --- | --- | --- | --- |
| 38---------- Clara and Meadowbrook | VIIw | --- | --- | --- | --- | --- |
| 40---------- Lutterloh | IIIw | 6.5 | 65 | 7.0 | 2,100 | --- |
| 41: | | | | | | |
| Tooles---------- | IIIw | --- | --- | --- | --- | --- |
| Meadowbrook---------- | IVw | --- | --- | 6.0 | --- | --- |
| 45---------- Chaires | IVw | 8.0 | --- | --- | --- | --- |
| 46---------- Pits | VIIIs | --- | --- | --- | --- | --- |
| 48: | | | | | | |
| Wekiva---------- | Vw | --- | --- | --- | --- | --- |
| Tennille---------- | VIw | --- | --- | --- | --- | --- |
| Tooles---------- | VIw | --- | --- | --- | --- | --- |
| 49: | | | | | | |
| Seaboard---------- | VIs | --- | --- | --- | --- | --- |
| Bushnell---------- | IIIw | 7.0 | --- | 7.0 | --- | --- |
| Matmon---------- | IVs | 7.0 | --- | 7.0 | --- | --- |
| 51: | | | | | | |
| Tooles---------- | VIIw | --- | --- | --- | --- | --- |
| Nutall---------- | Vw | --- | --- | --- | --- | --- |
| 52: | | | | | | |
| Clara, depressional------ | VIIw | --- | --- | --- | --- | --- |
| Clara---------- | VIw | --- | --- | --- | --- | --- |
| Meadowbrook---------- | IVw | 5.0 | --- | 6.0 | --- | --- |
| 53---------- Bayvi | VIIIw | --- | --- | --- | --- | --- |
| 54: | | | | | | |
| Tooles---------- | IIIw | --- | --- | --- | --- | --- |
| Meadowbrook---------- | IVw | 5.0 | --- | 6.0 | --- | --- |
| Clara---------- | VIIw | --- | --- | --- | --- | --- |
| 55---------- Arents | VIs | --- | --- | --- | --- | --- |

See footnote at end of table.

Table 7.--Land Capability Classes and Yields per Acre of Crops and Pasture--Continued

| Soil name and map symbol | Land capability | Bahiagrass | Corn | Improved bermudagrass | Tobacco | Watermelons |
|---|---|---|---|---|---|---|
| | | AUM* | Bu | AUM* | Lbs | Tons |
| 57---------- Sapelo | VIw | --- | --- | --- | --- | --- |
| 58---------- Leon | VIw | --- | --- | --- | --- | --- |
| 59---------- Arents | VIIs | --- | --- | --- | --- | --- |
| 60: | | | | | | |
| Chaires---------- | IVw | 8.0 | --- | 6.0 | --- | --- |
| Meadowbrook---------- | IVw | 6.0 | --- | --- | --- | --- |
| 61: | | | | | | |
| Wekiva---------- | IVw | 6.5 | --- | --- | --- | --- |
| Tooles---------- | VIIw | --- | --- | --- | --- | --- |
| Tennille---------- | Vw | 6.0 | | --- | --- | --- |
| 62---------- Tooles, Tennille, and Wekiva | VIIw | --- | --- | --- | --- | --- |
| 63---------- Steinhatchee | IIIw | 8.0 | --- | --- | --- | --- |
| 64: | | | | | | |
| Tooles---------- | IIIw | --- | --- | --- | --- | --- |
| Wekiva---------- | IVw | 6.5 | --- | --- | --- | --- |
| 65, 67: | | | | | | |
| Yellowjacket---------- | VIIw | --- | --- | --- | --- | --- |
| Maurepas---------- | VIIIw | --- | --- | --- | --- | --- |
| 68: | | | | | | |
| Matmon---------- | IVs | --- | --- | --- | --- | --- |
| Wekiva---------- | Vw | --- | --- | --- | --- | --- |
| Rock outcrop---------- | VIIIs | --- | --- | --- | --- | --- |
| 69: | | | | | | |
| Eunola---------- | IIw | --- | 90 | --- | --- | --- |
| Goldhead---------- | VIw | --- | --- | --- | --- | --- |
| Tooles---------- | VIw | --- | --- | --- | --- | --- |
| 70: | | | | | | |
| Chiefland---------- | IIIs | 8.0 | 65 | 10.5 | 2,500 | 12.0 |
| Chiefland, frequently flooded------ | Vw | --- | --- | --- | --- | --- |
| 71---------- Leon | IVw | 7.5 | 50 | 9.0 | --- | --- |

See footnote at end of table.

Table 7.--Land Capability Classes and Yields per Acre of Crops and Pasture--Continued

| Soil name and map symbol | Land capability | Bahiagrass | Corn | Improved bermudagrass | Tobacco | Watermelons |
|---|---|---|---|---|---|---|
| | | AUM* | Bu | AUM* | Lbs | Tons |
| 72--Chaires | IVw | 8.0 | --- | --- | --- | --- |
| 73--Chipley | IIIs | 7.5 | 50 | 8.0 | 2,000 | 5.0 |
| 74--Mascotte | IIIw | 8.0 | 50 | --- | --- | 5.0 |

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Table 8.--Recreational Development

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight" and "severe." Absence of an entry indicates that the soil was not rated.)

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 3: | | | | | |
| Osier | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| Clara | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 5--- Chaires | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 6--- Leon | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 8--- Meadowbrook | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 9--- Sapelo | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 10: | | | | | |
| Mandarin | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: wetness, droughty. |
| Hurricane | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 12--- Ortega | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 13--- Hurricane | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 14: | | | | | |
| Chipley | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Lynn Haven | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Boulogne | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 15--- Ridgewood | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 16: | | | | | |
| Lutterloh | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 16: | | | | | |
| Ridgewood | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 17: | | | | | |
| Ousley | Severe: flooding, too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Leon | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Clara | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, flooding. |
| 19: | | | | | |
| Otela | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: droughty. |
| Ortega | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Lutterloh | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 20: | | | | | |
| Melvina | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Mandarin | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: wetness, droughty. |
| 21--Kershaw | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 22--Ocilla | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: wetness, droughty. |
| 23: | | | | | |
| Melvina | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Moriah | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: wetness, droughty. |
| Lutterloh | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 24--Albany | Severe: wetness, too sandy. | Severe: too sandy. | Severe: too sandy, wetness. | Severe: too sandy. | Severe: droughty. |
| 25--Pottsburg | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 26: | | | | | |
| Resota | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Hurricane | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 27--Plummer | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 28: | | | | | |
| Surrency | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Starke | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Croatan | Severe: ponding, excess humus. | Severe: ponding, excess humus, too acid. | Severe: too acid, excess humus, ponding. | Severe: ponding. | Severe: excess humus, ponding, too acid. |
| 29: | | | | | |
| Albany | Severe: wetness, too sandy. | Severe: too sandy. | Severe: too sandy, wetness. | Severe: too sandy. | Severe: droughty. |
| Surrency | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| 30: | | | | | |
| Dorovan | Severe: ponding, excess humus. | Severe: ponding, excess humus, too acid. | Severe: excess humus, ponding, too acid. | Severe: ponding, excess humus. | Severe: too acid, ponding, excess humus. |
| Pamlico | Severe: flooding, ponding, excess humus. | Severe: ponding, excess humus, too acid. | Severe: excess humus, ponding, too acid. | Severe: ponding, excess humus. | Severe: too acid, ponding, excess humus. |
| 33: | | | | | |
| Wesconnett | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Evergreen | Severe: ponding, excess humus. | Severe: ponding, excess humus. | Severe: excess humus, ponding. | Severe: ponding, excess humus. | Severe: ponding, excess humus. |
| Pamlico | Severe: flooding, ponding, excess humus. | Severe: ponding, excess humus, too acid. | Severe: excess humus, ponding, too acid. | Severe: ponding, excess humus. | Severe: too acid, ponding, excess humus. |
| 34: | | | | | |
| Clara | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, flooding. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 34: | | | | | |
| Bodiford | Severe: flooding, ponding, excess humus. | Severe: ponding, excess humus. | Severe: excess humus, ponding, flooding. | Severe: ponding, excess humus. | Severe: ponding, flooding, excess humus. |
| 35: | | | | | |
| Tooles | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, flooding. |
| Meadowbrook | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, droughty, flooding. |
| Wekiva | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| 37: | | | | | |
| Tooles | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Meadowbrook | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding, droughty. |
| 38: | | | | | |
| Clara | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Meadowbrook | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding, droughty. |
| 40 Lutterloh | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 41: | | | | | |
| Tooles | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Meadowbrook | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 45 Chaires | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 46. Pits | | | | | |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 48: | | | | | |
| Wekiva | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| Tennille | Severe: flooding, wetness. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| Tooles | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 49: | | | | | |
| Seaboard | Severe: too sandy, depth to rock. | Severe: too sandy, depth to rock. | Severe: too sandy, depth to rock. | Severe: too sandy. | Severe: droughty, depth to rock. |
| Bushnell | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Moderate: wetness, depth to rock. |
| Matmon | Severe: wetness, too sandy. | Severe: too sandy, depth to rock. | Severe: too sandy, wetness, depth to rock. | Severe: too sandy. | Severe: depth to rock. |
| 51: | | | | | |
| Tooles | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, flooding. |
| Nutall | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness, flooding. | Severe: wetness, too sandy. | Severe: wetness, flooding. |
| 52: | | | | | |
| Clara, depressional | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| Clara | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Meadowbrook | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 53--- Bayvi | Severe: flooding, wetness. | Severe: wetness, excess salt. | Severe: wetness, flooding. | Severe: wetness. | Severe: excess salt, wetness, droughty. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 54: | | | | | |
| Tooles | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Meadowbrook | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| Clara | Severe: ponding, too sandy. | Severe: ponding, too sandy. | Severe: too sandy, ponding. | Severe: ponding, too sandy. | Severe: ponding. |
| 55--- Arents | Severe: too sandy. | Severe: too sandy. | Moderate: slope, wetness. | Severe: too sandy. | Severe: droughty. |
| 57--- Sapelo | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 58--- Leon | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 59--- Arents | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 60: | | | | | |
| Chaires | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Meadowbrook | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |
| 61: | | | | | |
| Wekiva | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| Tooles | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Tennille | Severe: flooding, wetness. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| 62: | | | | | |
| Tooles | Severe: flooding, wetness. too sandy | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Tennille | Severe: wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 62: | | | | | |
| Wekiva | Severe: ponding, too sandy, depth to rock. | Severe: ponding, too sandy, depth to rock. | Severe: too sandy, ponding, depth to rock. | Severe: ponding, too sandy. | Severe: ponding, depth to rock. |
| 63--- Steinhatchee | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 64: | | | | | |
| Tooles | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| Wekiva | Severe: wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| 65: | | | | | |
| Yellowjacket | Severe: flooding, wetness, excess humus. | Severe: wetness, excess humus. | Severe: excess humus, wetness, flooding. | Severe: wetness, excess humus. | Severe: wetness, flooding, excess humus. |
| Maurepas | Severe: flooding, ponding, excess humus. | Severe: ponding, excess humus. | Severe: excess humus, ponding, flooding. | Severe: ponding, excess humus. | Severe: ponding, flooding, excess humus. |
| 67: | | | | | |
| Yellowjacket | Severe: ponding, excess humus. | Severe: ponding, excess humus. | Severe: excess humus, ponding. | Severe: ponding, excess humus. | Severe: ponding, excess humus. |
| Maurepas | Severe: flooding, ponding, excess humus. | Severe: ponding, excess humus. | Severe: excess humus, ponding, flooding. | Severe: ponding, excess humus. | Severe: ponding, flooding, excess humus. |
| 68: | | | | | |
| Matmon | Severe: flooding, wetness, too sandy. | Severe: too sandy, depth to rock. | Severe: too sandy, wetness, depth to rock. | Severe: too sandy. | Severe: depth to rock. |
| Wekiva | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy, depth to rock. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, depth to rock. |
| Rock outcrop. | | | | | |
| 69: | | | | | |
| Eunola | Severe: flooding, too sandy. | Severe: too sandy. | Moderate: wetness, flooding. | Severe: too sandy. | Moderate: wetness, flooding. |
| Goldhead | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness, droughty. |

Table 8.--Recreational Development--Continued

| Soil name and map symbol | Camp areas | Picnic areas | Playgrounds | Paths and trails | Golf fairways |
|---|---|---|---|---|---|
| 69: | | | | | |
| Tooles | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 70: | | | | | |
| Chiefland | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| Chiefland, frequently flooded | Severe: flooding, too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty, flooding. |
| 71 Leon | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 72 Chaires | Severe: flooding, wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |
| 73 Chipley | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: too sandy. | Severe: droughty. |
| 74 Mascotte | Severe: wetness, too sandy. | Severe: wetness, too sandy. | Severe: too sandy, wetness. | Severe: wetness, too sandy. | Severe: wetness. |

Table 9.--Wildlife Habitat

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated.)

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 3: | | | | | | | | | | |
| Clara | Poor | Poor | Fair | Poor | Fair | Fair | Fair | Poor | Poor | Fair. |
| Osier | Very poor. | Poor | Fair | Fair | Fair | Fair | Good | Poor | Fair | Fair. |
| 5--- Chaires | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| 6--- Leon | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| 8--- Meadowbrook | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| 9--- Sapelo | Poor | Fair | Fair | Poor | Fair | Fair | Fair | Fair | Fair | Fair. |
| 10: | | | | | | | | | | |
| Mandarin | Very poor. | Poor | Poor | Poor | Fair | Very poor. | Very poor. | Poor | Poor | Very poor. |
| Hurricane | Poor | Poor | Fair | Fair | Fair | Poor | Very poor. | Poor | Fair | Very poor. |
| 12--- Ortega | Poor | Fair | Fair | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| 13--- Hurricane | Poor | Poor | Fair | Fair | Fair | Poor | Very poor. | Poor | Fair | Very poor. |
| 14: | | | | | | | | | | |
| Chipley | Poor | Fair | Fair | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| Lynn Haven | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Good | Very poor. | Very poor. | Good. |
| Boulogne | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| 15--- Ridgewood | Poor | Poor | Fair | Fair | Fair | Poor | Poor | Poor | Fair | Poor. |
| 16: | | | | | | | | | | |
| Lutterloh | Poor | Fair | Fair | Poor | Fair | Poor | Poor | Fair | Fair | Poor. |
| Ridgewood | Poor | Poor | Fair | Fair | Fair | Poor | Poor | Poor | Fair | Poor. |
| 17: | | | | | | | | | | |
| Ousley | Poor | Fair | Good | Fair | Fair | Poor | Very poor. | Fair | Fair | Very poor. |
| Leon | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| Clara | Very poor. | Very poor. | Poor | Fair | Poor | Fair | Fair | Very poor. | Poor | Fair. |

Table 9.--Wildlife Habitat--Continued

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 19: | | | | | | | | | | |
| Otela | Poor | Fair | Good | Fair | Fair | Poor | Poor | Fair | Fair | Very poor. |
| Ortega | Poor | Fair | Fair | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| Lutterloh | Poor | Fair | Fair | Poor | Fair | Poor | Poor | Fair | Fair | Poor. |
| 20: | | | | | | | | | | |
| Melvina | Fair | Fair | Fair | Fair | Fair | Poor | Poor | Fair | Fair | Poor. |
| Mandarin | Very poor. | Poor | Poor | Poor | Fair | Very poor. | Very poor. | Poor | Poor | Very poor. |
| 21--Kershaw | Very poor. | Poor | Poor | Very poor. | Very poor. | Very poor. | Very poor. | Poor | Very poor. | Very poor. |
| 22--Ocilla | Fair | Fair | Good | Fair | Good | Fair | Fair | Fair | Good | Fair. |
| 23: | | | | | | | | | | |
| Melvina | Fair | Fair | Fair | Fair | Fair | Poor | Poor | Fair | Fair | Poor. |
| Moriah | Poor | Fair | Good | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| Lutterloh | Poor | Fair | Fair | Poor | Fair | Poor | Poor | Fair | Fair | Poor. |
| 24--Albany | Fair | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair | Poor. |
| 25--Pottsburg | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| 26: | | | | | | | | | | |
| Resota | Poor | Poor | Fair | Poor | Poor | Very poor. | Very poor. | Poor | Poor | Very poor. |
| Hurricane | Poor | Poor | Fair | Fair | Fair | Poor | Very poor. | Poor | Fair | Very poor. |
| 27--Plummer | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| 28: | | | | | | | | | | |
| Surrency | Poor | Poor | Poor | Poor | Poor | Fair | Good | Poor | Poor | Fair. |
| Starke | Very poor. | Poor | Poor | Fair | Fair | Good | Good | Poor | Fair | Good. |
| Pamlico | Very poor. | Very poor. | Poor | Poor | Poor | Good | Good | Very poor. | Poor | Good. |
| 29: | | | | | | | | | | |
| Albany | Fair | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair | Poor. |
| Surrency | Poor | Poor | Poor | Poor | Poor | Fair | Good | Poor | Poor | Fair. |

Table 9.--Wildlife Habitat--Continued

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 30: | | | | | | | | | | |
| Dorovan | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Good | Good | Very poor. | Very poor. | Good. |
| Pamlico | Very poor. | Very poor. | Poor | Poor | Poor | Good | Good | Very poor. | Poor | Good. |
| 33: | | | | | | | | | | |
| Wesconnett | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Good | Very poor. | Very poor. | Good. |
| Evergreen | Very poor. | Very poor. | Poor | Very poor. | Very poor. | Good | Good | Very poor. | Very poor. | Good. |
| Pamlico | Very poor. | Very poor. | Poor | Poor | Poor | Good | Good | Very poor. | Poor | Good. |
| 34: | | | | | | | | | | |
| Clara | Very poor. | Very poor. | Poor | Fair | Poor | Fair | Fair | Very poor. | Poor | Fair. |
| Bodiford | Very poor. | Very poor. | Fair | Fair | Fair | Good | Good | Very poor. | Fair | Good. |
| 35: | | | | | | | | | | |
| Tooles | Very poor. | Poor | Poor | Poor | Poor | Fair | Good | Very poor. | Poor | Fair. |
| Meadowbrook | Very poor. | Very poor. | Poor | Fair | Poor | Good | Fair | Very poor. | Poor | Fair. |
| Wekiva | Poor | Poor | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair. |
| 37: | | | | | | | | | | |
| Tooles | Very poor. | Very poor. | Very poor. | Fair | Fair | Good | Good | Very poor. | Fair | Good. |
| Meadowbrook | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Good | Very poor. | Very poor. | Good. |
| 38: | | | | | | | | | | |
| Clara | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Fair | Very poor. | Very poor. | Fair. |
| Meadowbrook | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Good | Very poor. | Very poor. | Good. |
| 40----------<br>Lutterloh | Fair | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair | Poor. |
| 41: | | | | | | | | | | |
| Tooles | Very poor. | Very poor. | Very poor. | Fair | Fair | Good | Good | Very poor. | Fair | Good. |
| Meadowbrook | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| 45----------<br>Chaires | Poor | Fair | Fair | Poor | Fair | Fair | Fair | Fair | Fair | Fair. |
| 46.<br>Pits | | | | | | | | | | |

Table 9.--Wildlife Habitat--Continued

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 48: | | | | | | | | | | |
| Wekiva | Poor | Poor | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair. |
| Tennille | Poor | Poor | Poor | Poor | Poor | Fair | Poor | Poor | Poor | Poor. |
| Tooles | Very poor. | Poor | Poor | Poor | Poor | Fair | Good | Very poor. | Poor | Fair. |
| 49: | | | | | | | | | | |
| Seaboard | Poor | Poor | Fair | Fair | Poor | Very poor. | Very poor. | Fair | Fair | Very poor. |
| Bushnell | Fair | Fair | Good | Good | Good | Poor | Fair | Fair | Good | Fair. |
| Matmon | Poor | Poor | Fair | Poor | Poor | Fair | Poor | Poor | Poor | Poor. |
| 51: | | | | | | | | | | |
| Tooles | Very poor. | Poor | Poor | Poor | Poor | Fair | Good | Very poor. | Poor | Fair. |
| Nutall. | | | | | | | | | | |
| 52: | | | | | | | | | | |
| Clara, depressional | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Fair | Very poor. | Very poor. | Fair. |
| Clara | Poor | Poor | Fair | Poor | Fair | Fair | Fair | Poor | Poor | Fair. |
| Meadowbrook | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| 53--Bayvi | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Good | Very poor. | Very poor. | Fair. |
| 54: | | | | | | | | | | |
| Tooles | Poor | Fair | Fair | Fair | Fair | Fair | Good | Poor | Fair | Fair. |
| Meadowbrook | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| Clara | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Fair | Very poor. | Very poor. | Fair. |
| 55--Arents | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. |
| 57--Sapelo | Poor | Fair | Fair | Poor | Fair | Good | Fair | Poor | Fair | Fair. |
| 58--Leon | Poor | Fair | Fair | Poor | Fair | Good | Fair | Poor | Fair | Fair. |
| 59--Arents | Very poor. | Poor | Poor | Very poor. | Very poor. | Very poor. | Very poor. | Poor | Poor | Very poor. |
| 60: | | | | | | | | | | |
| Chaires | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |
| Meadowbrook | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair. |
| 61: | | | | | | | | | | |
| Wekiva | Poor | Poor | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair. |

Table 9.--Wildlife Habitat--Continued

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 61: | | | | | | | | | | |
| Tooles | Poor | Fair | Fair | Fair | Fair | Fair | Good | Poor | Fair | Fair. |
| Tennille | Poor | Poor | Poor | Poor | Poor | Fair | Poor | Poor | Poor | Poor. |
| 62: | | | | | | | | | | |
| Tooles | Very poor. | Very poor. | Very poor. | Fair | Fair | Good | Good | Very poor. | Fair | Good. |
| Tennille | Very Poor | Very Poor | Very Poor | Very Poor | Very Poor | Fair | Good | Poor | Poor | Good. |
| Wekiva | Very poor. | Very poor. | Very poor. | Fair | Fair | Good | Good | Very poor. | Fair | Good. |
| 63--Steinhatchee | Poor | Fair | Fair | Poor | Fair | Fair | Fair | Fair | Fair | Fair. |
| 64: | | | | | | | | | | |
| Tooles | Poor | Fair | Fair | Fair | Fair | Fair | Good | Poor | Fair | Fair. |
| Wekiva | Poor | Poor | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair. |
| 65, 67: | | | | | | | | | | |
| Yellowjacket | Very poor. | Very poor. | Poor | Poor | Poor | Good | Good | Very poor. | Poor | Good. |
| Maurepas | Very poor. | Very poor. | Very poor. | Very poor. | Very poor. | Fair | Very poor. | Very poor. | Very poor. | Fair. |
| 68: | | | | | | | | | | |
| Matmon | Poor | Poor | Fair | Poor | Poor | Fair | Poor | Poor | Poor | Poor. |
| Wekiva | Poor | Poor | Fair | Fair | Fair | Fair | Fair | Poor | Fair | Fair. |
| Rock outcrop. | | | | | | | | | | |
| 69: | | | | | | | | | | |
| Eunola | Good | Good | Good | Good | Good | Poor | Very poor. | Good | Good | Very poor. |
| Goldhead | Poor | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Fair | Poor. |
| Tooles | Poor | Poor | Fair | Fair | Fair | Fair | Good | Poor | Fair | Fair. |
| 70: | | | | | | | | | | |
| Chiefland | Poor | Fair | Good | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| Chiefland, frequently flooded | Poor | Fair | Good | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| 71--Leon | Poor | Fair | Fair | Poor | Fair | Fair | Fair | Fair | Fair | Fair. |
| 72--Chaires | Poor | Fair | Fair | Poor | Fair | Fair | Fair | Fair | Fair | Fair. |

Table 9.--Wildlife Habitat--Continued

| Soil name and map symbol | Potential for habitat elements | | | | | | | Potential as habitat for-- | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain and seed crops | Grasses and legumes | Wild herbaceous plants | Hardwood trees | Coniferous plants | Wetland plants | Shallow water areas | Openland wildlife | Woodland wildlife | Wetland wildlife |
| 73--Chipley | Poor | Fair | Fair | Fair | Fair | Very poor. | Very poor. | Fair | Fair | Very poor. |
| 74--Mascotte | Poor | Fair | Fair | Poor | Fair | Poor | Fair | Fair | Fair | Poor. |

**Table 10.--Building Site Development**

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation.)

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 3: | | | | | | |
| Clara | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| Osier | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 5--Chaires | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 6--Leon | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 8--Meadowbrook | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 9--Sapelo | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 10: | | | | | | |
| Mandarin | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Moderate: wetness, droughty. |
| Hurricane | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 12--Ortega | Severe: cutbanks cave. | Slight | Moderate: wetness. | Slight | Slight | Severe: droughty. |
| 13--Hurricane | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 14: | | | | | | |
| Chipley | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| Lynn Haven | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Boulogne | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 15--Ridgewood | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 16: | | | | | | |
| Lutterloh | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| Ridgewood | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 17: | | | | | | |
| Ousley | Severe: cutbanks cave, wetness. | Severe: flooding. | Severe: flooding, wetness. | Severe: flooding. | Severe: flooding. | Severe: droughty. |
| Leon | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| Clara | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| 19: | | | | | | |
| Otela | Severe: cutbanks cave. | Slight | Moderate: wetness. | Slight | Slight | Moderate: droughty. |
| Ortega | Severe: cutbanks cave. | Slight | Moderate: wetness. | Slight | Slight | Severe: droughty. |
| Lutterloh | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 20: | | | | | | |
| Melvina | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| Mandarin | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Moderate: wetness, droughty. |
| 21--Kershaw | Severe: cutbanks cave. | Slight | Slight | Moderate: slope. | Slight | Severe: droughty. |
| 22--Ocilla | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness, droughty. |
| 23: | | | | | | |
| Melvina | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| Moriah | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Moderate: wetness, droughty. |
| Lutterloh | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 24--Albany | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Moderate: wetness. | Severe: droughty. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 25---------- Pottsburg | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 26 | | | | | | |
| Resota---------- | Severe: cutbanks cave. | Slight--------- | Moderate: wetness. | Slight--------- | Slight--------- | Severe: droughty. |
| Hurricane-------- | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 27---------- Plummer | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 28: | | | | | | |
| Surrency--------- | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Starke---------- | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Croatan---------- | Severe: excess humus, ponding, wetness. | Severe: subsides, ponding, wetness. | Severe: subsides, ponding, wetness. | Severe: subsides, ponding, wetness. | Severe: subsides, low strength, ponding. | Severe: too acid, ponding, excess humus. |
| 29: | | | | | | |
| Albany---------- | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Moderate: wetness. | Severe: droughty. |
| Surrency--------- | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| 30: | | | | | | |
| Dorovan---------- | Severe: excess humus, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: ponding, excess humus. |
| Pamlico---------- | Severe: cutbanks cave, excess humus, ponding. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding. | Severe: flooding, ponding, low strength. | Severe: low strength, ponding. | Severe: too acid, ponding, excess humus. |
| 33: | | | | | | |
| Wesconnett------- | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Evergreen-------- | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding, excess humus. |
| Pamlico---------- | Severe: cutbanks cave, excess humus, ponding. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding. | Severe: flooding, ponding, low strength. | Severe: low strength, ponding. | Severe: too acid, ponding, excess humus. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 34: | | | | | | |
| Clara | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| Bodiford | Severe: cutbanks cave, ponding. | Severe: flooding, ponding. | Severe: flooding, ponding. | Severe: flooding, ponding. | Severe: ponding, flooding. | Severe: ponding, flooding, excess humus. |
| 35: | | | | | | |
| Tooles | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| Meadowbrook | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, droughty, |
| Wekiva | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness, flooding. | Severe: wetness, depth to rock. |
| 37: | | | | | | |
| Tooles | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Meadowbrook | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding, droughty. |
| 38: | | | | | | |
| Clara | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Meadowbrook | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding, droughty. |
| 40 Lutterloh | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 41: | | | | | | |
| Tooles | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: ponding. |
| Meadowbrook | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 45 Chaires | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 46. Pits | | | | | | |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 48: | | | | | | |
| Wekiva | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness, flooding. | Severe: wetness, depth to rock. |
| Tennille | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness, flooding. | Severe: wetness, depth to rock. |
| Tooles | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| 49: | | | | | | |
| Seaboard | Severe: depth to rock. | Moderate: depth to rock. | Severe: depth to rock. | Moderate: depth to rock. | Moderate: depth to rock. | Severe: droughty, depth to rock. |
| Bushnell | Severe: wetness. | Severe: shrink-swell. | Severe: wetness, shrink-swell. | Severe: shrink-swell. | Severe: shrink-swell, low strength. | Moderate: wetness, droughty, depth to rock. |
| Matmon | Severe: depth to rock, wetness. | Severe: wetness. | Severe: wetness, depth to rock. | Severe: wetness. | Moderate: depth to rock, wetness. | Severe: depth to rock. |
| 51: | | | | | | |
| Tooles | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| Nutall | Severe: wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, flooding. |
| 52: | | | | | | |
| Clara, depressional | Severe: cutbanks cave, ponding, wetness. | Severe: flooding, ponding, wetness. | Severe: flooding, ponding, wetness | Severe: flooding, ponding, wetness. | Severe: ponding, wetness, flooding | Severe: ponding, wetness. |
| Clara | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness. |
| Meadowbrook | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, droughty. |
| 53 Bayvi | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: excess salt, wetness, droughty. |
| 54: | | | | | | |
| Tooles | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 54: | | | | | | |
| Meadowbrook | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| Clara | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| 55--- Arents | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 57--- Sapelo | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 58--- Leon | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 59--- Arents | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 60: | | | | | | |
| Chaires | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| Meadowbrook | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness, droughty. |
| 61: | | | | | | |
| Wekiva | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness. | Severe: wetness, depth to rock. |
| Tooles | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness. | Severe: wetness. |
| Tennille | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness. | Severe: wetness, depth to rock. |
| 62: | | | | | | |
| Tooles | Severe: cutbanks cave, ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. | Severe: ponding. |
| Tennille | Severe: depth to rock, wetness. | Severe: ponding, depth to rock. | Severe: ponding, depth to rock. | Severe: ponding, depth to rock. | Severe: depth to rock, ponding. | Severe: ponding, depth to rock. |
| Wekiva | Severe: depth to rock, ponding. | Severe: ponding, depth to rock. | Severe: ponding, depth to rock. | Severe: ponding, depth to rock. | Severe: depth to rock, ponding. | Severe: ponding, depth to rock. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 63--Steinhatchee | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| 64: | | | | | | |
| Tooles | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |
| Wekiva | Severe: depth to rock, wetness. | Severe: wetness, depth to rock. | Severe: wetness, depth to rock. | Severe: wetness, depth to rock. | Severe: depth to rock, wetness. | Severe: wetness, depth to rock. |
| 65: | | | | | | |
| Yellowjacket | Severe: cutbanks cave, excess humus, wetness. | Severe: subsides, flooding, wetness. | Severe: subsides, flooding, wetness. | Severe: subsides, flooding, wetness. | Severe: subsides, wetness, flooding. | Severe: wetness, flooding, excess humus. |
| Maurepas | Severe: excess humus, ponding. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding, low strength. | Severe: ponding, flooding. | Severe: ponding, flooding, excess humus. |
| 67: | | | | | | |
| Yellowjacket | Severe: cutbanks cave, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: subsides, ponding. | Severe: ponding, excess humus. |
| Maurepas | Severe: excess humus, ponding. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding, low strength. | Severe: flooding, ponding, low strength. | Severe: ponding, flooding. | Severe: ponding, flooding, excess humus. |
| 68: | | | | | | |
| Matmon | Severe: depth to rock, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness. | Severe: flooding. | Severe: depth to rock. |
| Wekiva | Severe: depth to rock, wetness. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: flooding, wetness, depth to rock. | Severe: depth to rock, wetness, flooding. | Severe: wetness, depth to rock. |
| Rock outcrop. | | | | | | |
| 69: | | | | | | |
| Eunola | Severe: cutbanks cave, wetness. | Severe: flooding. | Severe: flooding, wetness. | Severe: flooding. | Severe: flooding. | Moderate: wetness, flooding. |
| Goldhead | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness, droughty. |
| Tooles | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness, flooding. | Severe: wetness. |

Table 10.--Building Site Development--Continued

| Soil name and map symbol | Shallow excavations | Dwellings without basements | Dwellings with basements | Small commercial buildings | Local roads and streets | Lawns and landscaping |
|---|---|---|---|---|---|---|
| 70: | | | | | | |
| Chiefland | Severe: cutbanks cave. | Slight | Moderate: depth to rock. | Slight | Slight | Severe: droughty. |
| Chiefland, frequently flooded | Severe: cutbanks cave. | Severe: flooding. | Severe: flooding. | Severe: flooding. | Severe: flooding. | Severe: droughty, flooding. |
| 71 Leon | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness. | Severe: wetness. |
| 72 Chaires | Severe: cutbanks cave, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: flooding, wetness. | Severe: wetness. | Severe: wetness. |
| 73 Chipley | Severe: cutbanks cave, wetness. | Moderate: wetness. | Severe: wetness. | Moderate: wetness. | Moderate: wetness. | Severe: droughty. |
| 74 Mascotte | Severe: cutbanks cave, wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. | Severe: wetness. |

Table 11.--Sanitary Facilities

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation.)

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 3: | | | | | |
| Clara | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Osier | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 5 | | | | | |
| Chaires | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 6 | | | | | |
| Leon | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 8 | | | | | |
| Meadowbrook | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 9 | | | | | |
| Sapelo | Severe: wetness. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 10: | | | | | |
| Mandarin | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: wetness, seepage. | Poor: seepage, too sandy. |
| Hurricane | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 12 | | | | | |
| Ortega | Moderate: wetness. | Severe: seepage. | Severe: seepage, wetness, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| 13 | | | | | |
| Hurricane | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 14: | | | | | |
| Chipley | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 14: | | | | | |
| Lynn Haven | Severe: ponding, poor filter. | Severe: seepage, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Boulogne | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 15 | | | | | |
| Ridgewood | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 16: | | | | | |
| Lutterloh | Severe: wetness, poor filter. | Severe: seepage. | Severe: wetness, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| Ridgewood | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 17: | | | | | |
| Ousley | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, wetness. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy. |
| Leon | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Clara | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, wetness. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 19: | | | | | |
| Otela | Severe: percs slowly, poor filter. | Severe: seepage. | Severe: too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| Ortega | Moderate: wetness. | Severe: seepage. | Severe: seepage, wetness, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| Lutterloh | Severe: wetness, poor filter. | Severe: seepage. | Severe: wetness, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| 20: | | | | | |
| Melvina | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 20: | | | | | |
| Mandarin | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: wetness, seepage. | Poor: seepage, too sandy. |
| 21 Kershaw | Severe: poor filter. | Severe: seepage. | Severe: seepage, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| 22 Ocilla | Severe: wetness. | Severe: seepage, wetness. | Severe: wetness. | Severe: seepage, wetness. | Fair: wetness. |
| 23: | | | | | |
| Melvina | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| Moriah | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness. | Severe: seepage, wetness. | Poor: thin layer. |
| Lutterloh | Severe: wetness, poor filter. | Severe: seepage. | Severe: wetness, too sandy. | Severe: seepage. | Poor: seepage, too sandy. |
| 24 Albany | Severe: wetness. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: too sandy, wetness. |
| 25 Pottsburg | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 26: | | | | | |
| Resota | Moderate: wetness. | Severe: seepage. | Severe: seepage, wetness. | Severe: seepage. | Poor: seepage, too sandy. |
| Hurricane | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 27 Plummer | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: too sandy, wetness. |
| 28: | | | | | |
| Surrency | Severe: ponding. | Severe: seepage, ponding. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: too sandy, ponding. |
| Starke | Severe: ponding, percs slowly. | Severe: seepage. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Croatan | Severe: ponding, percs slowly. | Severe: seepage, excess humus, ponding. | Severe: ponding, too acid. | Severe: seepage, ponding. | Poor: ponding. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 29: | | | | | |
| Albany | Severe: wetness. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: too sandy, wetness. |
| Surrency | Severe: ponding. | Severe: seepage, ponding. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: too sandy, ponding. |
| 30: | | | | | |
| Dorovan | Severe: subsides, ponding. | Severe: excess humus, ponding. | Severe: seepage, ponding. | Severe: ponding. | Poor: ponding, excess humus. |
| Pamlico | Severe: ponding, poor filter. | Severe: seepage, excess humus, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| 33: | | | | | |
| Wesconnett | Severe: ponding, poor filter. | Severe: seepage, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Evergreen | Severe: ponding, poor filter. | Severe: seepage, excess humus, ponding. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Pamlico | Severe: ponding, poor filter. | Severe: seepage, excess humus, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| 34: | | | | | |
| Clara | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, wetness. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Bodiford | Severe: flooding, ponding, percs slowly. | Severe: seepage, flooding, excess humus. | Severe: flooding, depth to rock, ponding. | Severe: flooding, seepage, ponding. | Poor: seepage, too sandy, ponding. |
| 35: | | | | | |
| Tooles | Severe: flooding, wetness, percs slowly. | Severe: seepage, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Meadowbrook | Severe: flooding, wetness, percs slowly. | Severe: seepage, flooding, wetness. | Severe: flooding, wetness, too sandy. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Wekiva | Severe: flooding, depth to rock, wetness. | Severe: depth to rock, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, wetness. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 37: | | | | | |
| Tooles | Severe: ponding, percs slowly. | Severe: seepage, ponding. | Severe: depth to rock, ponding. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Meadowbrook | Severe: ponding, percs slowly. | Severe: seepage, ponding. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| 38: | | | | | |
| Clara | Severe: ponding, poor filter. | Severe: seepage, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Meadowbrook | Severe: ponding, percs slowly. | Severe: seepage, ponding. | Severe: ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| 40 Lutterloh | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness. | Severe: seepage, wetness. | Poor: too sandy. |
| 41: | | | | | |
| Tooles | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: depth to rock, wetness. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Meadowbrook | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 45 Chaires | Severe: wetness, percs slowly. | Severe: wetness. | Severe: depth to rock, wetness, too sandy. | Severe: wetness. | Poor: seepage, too sandy, wetness. |
| 46. Pits | | | | | |
| 48: | | | | | |
| Wekiva | Severe: flooding, depth to rock, wetness. | Severe: depth to rock, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, wetness. |
| Tennille | Severe: flooding, depth to rock, wetness. | Severe: seepage, depth to rock, flooding. | Severe: flooding, depth to rock, seepage. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, seepage, too sandy. |
| Tooles | Severe: flooding, wetness, percs slowly. | Severe: seepage, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 49: | | | | | |
| Seaboard | Severe: depth to rock. | Severe: seepage, depth to rock. | Severe: depth to rock, seepage, wetness. | Severe: depth to rock. | Poor: depth to rock, seepage, too sandy. |
| Bushnell | Severe: depth to rock, wetness, percs slowly. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness, too clayey. | Severe: depth to rock. | Poor: depth to rock, wetness. |
| Matmon | Severe: depth to rock, wetness, percs slowly. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness, too clayey. | Severe: depth to rock. | Poor: depth to rock, too clayey, hard to pack. |
| 51: | | | | | |
| Tooles | Severe: flooding, wetness, percs slowly. | Severe: seepage, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Nutall | Severe: flooding, depth to rock, wetness. | Severe: seepage, depth to rock, flooding. | Severe: flooding, depth to rock, wetness. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, wetness. |
| 52: | | | | | |
| Clara, depressional | Severe: flooding, ponding, poor filter. | Severe: seepage, flooding, ponding. | Severe: flooding seepage, ponding. | Severe: flooding, seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Clara | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, wetness. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Meadowbrook | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 53 Bayvi | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, excess humus. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 54: | | | | | |
| Tooles | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Meadowbrook | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Clara | Severe: ponding, poor filter. | Severe: seepage, ponding. | Severe: seepage, ponding, too sandy. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 55--Arents | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 57--Sapelo | Severe: wetness. | Severe: seepage, wetness. | Severe: wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 58--Leon | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 59--Arents | Severe: wetness. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 60: | | | | | |
| Chaires | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Meadowbrook | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 61: | | | | | |
| Wekiva | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Poor: depth to rock, wetness. |
| Tooles | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Tennille | Severe: depth to rock, wetness. | Severe: seepage, depth to rock. | Severe: depth to rock, seepage. | Severe: depth to rock, wetness. | Poor: depth to rock, seepage, too sandy. |
| 62: | | | | | |
| Tooles | Severe: ponding, percs slowly. | Severe: seepage, ponding. | Severe: depth to rock, ponding. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Tennille | Severe: depth to rock, ponding. | Severe: seepage, depth to rock, ponding. | Severe: depth to rock, ponding, seepage. | Severe: depth to rock, ponding. | Poor: depth to rock, seepage, too sandy. |
| Wekiva | Severe: depth to rock, ponding. | Severe: depth to rock, ponding. | Severe: depth to rock, ponding. | Severe: depth to rock, ponding. | Poor: depth to rock, ponding. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 63--Steinhatchee | Severe: wetness, percs slowly. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 64: | | | | | |
| Tooles | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: depth to rock, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Wekiva | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Severe: depth to rock, wetness. | Poor: depth to rock, wetness. |
| 65: | | | | | |
| Yellowjacket | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding, excess humus. | Severe: flooding, seepage, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| Maurepas | Severe: flooding, ponding, poor filter. | Severe: seepage, flooding, excess humus. | Severe: flooding, seepage, ponding. | Severe: flooding, seepage, ponding. | Severe: flooding, seepage, ponding. |
| 67: | | | | | |
| Yellowjacket | Severe: ponding, poor filter. | Severe: seepage, excess humus, ponding. | Severe: depth to rock, seepage, ponding. | Severe: seepage, ponding. | Poor: seepage, too sandy, ponding. |
| Maurepas | Severe: flooding, ponding, poor filter. | Severe: seepage, flooding, excess humus. | Severe: flooding, seepage, ponding. | Severe: flooding, seepage, ponding. | Severe: flooding, seepage, ponding. |
| 68: | | | | | |
| Matmon | Severe: flooding, depth to rock, wetness. | Severe: depth to rock, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, wetness. |
| Wekiva | Severe: flooding, depth to rock, wetness. | Severe: depth to rock, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, depth to rock, wetness. | Poor: depth to rock, wetness. |
| Rock outcrop. | | | | | |
| 69: | | | | | |
| Eunola | Severe: flooding, wetness. | Severe: seepage, flooding, wetness. | Severe: flooding, seepage, wetness. | Severe: flooding, wetness. | Fair: too clayey, wetness, thin layer. |
| Goldhead | Severe: flooding, wetness, poor filter. | Severe: seepage, flooding. | Severe: flooding, wetness, too sandy. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |

Table 11.--Sanitary Facilities--Continued

| Soil name and map symbol | Septic tank absorption fields | Sewage lagoon areas | Trench sanitary landfill | Area sanitary landfill | Daily cover for landfill |
|---|---|---|---|---|---|
| 69: Tooles | Severe: flooding, wetness, percs slowly. | Severe: seepage, flooding, wetness. | Severe: flooding, depth to rock, wetness. | Severe: flooding, seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 70: Chiefland | Severe: depth to rock, poor filter. | Severe: seepage, depth to rock. | Severe: depth to rock, too sandy. | Severe: depth to rock, seepage. | Poor: depth to rock, seepage, too sandy. |
| Chiefland, frequently flooded | Severe: flooding, depth to rock, poor filter. | Severe: seepage, depth to rock, flooding. | Severe: flooding, depth to rock, too sandy. | Severe: flooding, depth to rock, seepage. | Poor: depth to rock, seepage, too sandy. |
| 71 Leon | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness. | Severe: seepage, wetness. | Poor: seepage, too sandy, wetness. |
| 72 Chaires | Severe: wetness, percs slowly. | Severe: wetness. | Severe: depth to rock, wetness, too sandy. | Severe: wetness. | Poor: seepage, too sandy, wetness. |
| 73 Chipley | Severe: wetness, poor filter. | Severe: seepage, wetness. | Severe: seepage, wetness, too sandy. | Severe: seepage, wetness. | Poor: seepage, too sandy. |
| 74 Mascotte | Severe: wetness, percs slowly, poor filter. | Severe: seepage, wetness. | Severe: wetness. | Severe: seepage, wetness. | Poor: wetness, thin layer. |

Table 12.--Construction Materials

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation.)

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 3: | | | | |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Osier | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 5--- Chaires | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 6--- Leon | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 8--- Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 9--- Sapelo | Poor: wetness. | Improbable: excess fines. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 10: | | | | |
| Mandarin | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| Hurricane | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 12--- Ortega | Good | Probable | Improbable: too sandy. | Poor: too sandy. |
| 13--- Hurricane | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 14: | | | | |
| Chipley | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| Lynn Haven | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Boulogne | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 15--- Ridgewood | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 16: | | | | |
| Lutterloh | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 16: | | | | |
| Ridgewood | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 17: | | | | |
| Ousley | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| Leon | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 19: | | | | |
| Otela | Good | Probable | Improbable: too sandy. | Poor: too sandy. |
| Ortega | Good | Probable | Improbable: too sandy. | Poor: too sandy. |
| Lutterloh | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 20: | | | | |
| Melvina | Fair: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy. |
| Mandarin | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 21--Kershaw | Good | Probable | Improbable: too sandy. | Severe: seepage. |
| 22--Ocilla | Fair: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: too sandy. |
| 23: | | | | |
| Melvina | Fair: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy. |
| Moriah | Fair: depth to rock, thin layer, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: too sandy. |
| Lutterloh | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 24--Albany | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 25--Pottsburg | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 26: | | | | |
| Resota | Good | Probable | Improbable: too sandy. | Poor: too sandy. |
| Hurricane | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 27--Plummer | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 28: | | | | |
| Surrency | Poor: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: too sandy, wetness. |
| Starke | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Croatan | Poor: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: excess humus, wetness, too acid. |
| 29: | | | | |
| Albany | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| Surrency | Poor: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: too sandy, wetness. |
| 30: | | | | |
| Dorovan | Poor: wetness. | Probable | Improbable: too sandy. | Poor: excess humus, wetness. |
| Pamlico | Poor: low strength, wetness. | Probable | Improbable: too sandy. | Poor: excess humus, wetness. |
| 33: | | | | |
| Wesconnett | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Evergreen | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Pamlico | Poor: low strength, wetness. | Probable | Improbable: too sandy. | Poor: excess humus, wetness, too acid. |
| 34: | | | | |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Bodiford | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 35: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 35: | | | | |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| 37: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 38: | | | | |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 40 Lutterloh | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 41: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 45 Chaires | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 46. Pits | | | | |
| 48: | | | | |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| Tennille | Poor: depth to rock, wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: depth to rock, too sandy, wetness. |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 49: | | | | |
| Seaboard | Poor: depth to rock. | Improbable: thin layer. | Improbable: too sandy. | Poor: depth to rock, too sandy. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 49: | | | | |
| Bushnell | Poor: depth to rock, shrink-swell, low strength. | Improbable: thin layer, excess fines. | Improbable: too sandy. | Poor: too clayey. |
| Matmon | Poor: depth to rock. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock. |
| 51: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Nutall | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: too sandy, wetness. |
| 52: | | | | |
| Clara, depressional | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 53--Bayvi | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, excess salt, wetness. |
| 54: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Clara | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 55--Arents | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 57--Sapelo | Poor: wetness. | Improbable: excess fines. | Improbable: too sandy. | Poor: too sandy, |
| 58--Leon | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 59--Arents | Poor: thin layer. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 60: | | | | |
| Chaires | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Meadowbrook | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 61: | | | | |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Tennille | Poor: depth to rock, wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: depth to rock, too sandy, wetness. |
| 62: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Tennille | Poor: depth to rock, wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: depth to rock, too sandy, wetness. |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| 63--Steinhatchee | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 64: | | | | |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| 65: | | | | |
| Yellowjacket | Poor: wetness. | Probable | Improbable: too sandy. | Poor: excess humus, wetness. |
| Maurepas | Poor: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: excess humus, wetness. |
| 67: | | | | |
| Yellowjacket | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: excess humus, wetness. |

Table 12.--Construction Materials--Continued

| Soil name and map symbol | Roadfill | Sand | Gravel | Topsoil |
|---|---|---|---|---|
| 67: | | | | |
| Maurepas | Poor: wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: excess humus, wetness. |
| 68: | | | | |
| Matmon | Poor: depth to rock. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock. |
| Wekiva | Poor: depth to rock, wetness. | Improbable: excess fines. | Improbable: excess fines. | Poor: depth to rock, wetness. |
| Rock outcrop. | | | | |
| 69: | | | | |
| Eunola | Fair: wetness. | Probable | Improbable: too sandy. | Fair: too clayey, small stones, thin layer. |
| Goldhead | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| Tooles | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 70: | | | | |
| Chiefland | Poor: depth to rock. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy. |
| Chiefland, frequently flooded | Poor: depth to rock. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy. |
| 71--- Leon | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |
| 72--- Chaires | Poor: wetness. | Improbable: thin layer. | Improbable: too sandy. | Poor: too sandy, wetness. |
| 73--- Chipley | Fair: wetness. | Probable | Improbable: too sandy. | Poor: too sandy. |
| 74--- Mascotte | Poor: wetness. | Probable | Improbable: too sandy. | Poor: too sandy, wetness. |

Table 13.--Water Management

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation.)

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 3: | | | | | | | |
| Clara | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Osier | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy. | Wetness, droughty. |
| 5--- Chaires | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 6--- Leon | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing | Wetness, droughty, |
| 8--- Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 9--- Sapelo | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 10: | | | | | | | |
| Mandarin | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Too sandy, soil blowing, wetness. | Droughty. |
| Hurricane | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 12--- Ortega | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Deep to water | Droughty, fast intake. | Too sandy, soil blowing. | Droughty. |
| 13--- Hurricane | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 14: | | | | | | | |
| Chipley | Severe: seepage. | Severe: seepage. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| Lynn Haven | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 14: | | | | | | | |
| Boulogne | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 15--- Ridgewood | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 16: | | | | | | | |
| Lutterloh | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| Ridgewood | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 17: | | | | | | | |
| Ousley | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, cutbanks cave. | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| Leon | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Erodes easily, wetness, too sandy. | Wetness, erodes easily, droughty. |
| Clara | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 19: | | | | | | | |
| Otela | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Droughty, fast intake. | Too sandy, soil blowing. | Droughty. |
| Ortega | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Deep to water | Droughty, fast intake. | Too sandy, soil blowing. | Droughty. |
| Lutterloh | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 20: | | | | | | | |
| Melvina | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Droughty. |
| Mandarin | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Too sandy, soil blowing, wetness. | Droughty. |
| 21--- Kershaw | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Slope, droughty, fast intake. | Too sandy, soil blowing. | Droughty. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 22--Ocilla | Severe: seepage. | Severe: piping, wetness. | Severe: cutbanks cave. | Favorable | Wetness, droughty, fast intake. | Wetness, soil blowing. | Droughty. |
| 23: | | | | | | | |
| Melvina | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Droughty. |
| Moriah | Severe: seepage. | Severe: piping, wetness. | Severe: cutbanks cave. | Favorable | Wetness, droughty, fast intake. | Wetness, soil blowing. | Droughty. |
| Lutterloh | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 24--Albany | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 25--Pottsburg | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 26: | | | | | | | |
| Resota | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Deep to water | Droughty, fast intake. | Too sandy, soil blowing. | Droughty. |
| Hurricane | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 27--Plummer | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 28: | | | | | | | |
| Surrency | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty, rooting depth. |
| Starke | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy, soil blowing. | Wetness, droughty. |
| Croatan | Severe: seepage. | Severe: piping, ponding. | Severe: slow refill. | Ponding, percs slowly, subsides. | Ponding, soil blowing, percs slowly. | Ponding, soil blowing. | Wetness, percs slowly. |
| 29: | | | | | | | |
| Albany | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Severe: slow refill, cutbanks cave. | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 29: | | | | | | | |
| Surrency | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty, rooting depth. |
| 30: | | | | | | | |
| Dorovan | Moderate: seepage. | Severe: excess humus, ponding. | Severe: cutbanks cave. | Ponding, subsides. | Ponding, soil blowing. | Ponding, soil blowing. | Wetness. |
| Pamlico | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, subsides, cutbanks cave. | Ponding, soil blowing. | Ponding, too sandy, soil blowing. | Wetness. |
| 33: | | | | | | | |
| Wesconnett | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| Evergreen | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, subsides, cutbanks cave. | Ponding | Ponding, too sandy. | Wetness. |
| Pamlico | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, subsides, cutbanks cave. | Ponding, soil blowing. | Ponding, too sandy, soil blowing. | Wetness. |
| 34: | | | | | | | |
| Clara | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Bodiford | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, flooding, subsides. | Ponding, flooding. | Ponding, too sandy. | Wetness. |
| 35: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Flooding, cutbanks cave. | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Wekiva | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| 37: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, percs slowly. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty, percs slowly. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- | | | Features affecting-- | | | |
|---|---|---|---|---|---|---|---|
| | Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Drainage | Irrigation | Terraces and diversions | Grassed waterways |
| 37: | | | | | | | |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| 38: | | | | | | | |
| Clara | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| 40 Lutterloh | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 41: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Ponding, percs slowly. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty, percs slowly. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 45 Chaires | Moderate: seepage, depth to rock. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 46. Pits | | | | | | | |
| 48: | | | | | | | |
| Wekiva | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| Tennille | Severe: depth to rock. | Severe: seepage, piping, wetness. | Severe: depth to rock, cutbanks cave. | Depth to rock, flooding, cutbanks cave. | Wetness, droughty, fast intake. | Depth to rock, wetness, too sandy. | Wetness, droughty, depth to rock. |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| 49: | | | | | | | |
| Seaboard | Severe: depth to rock. | Severe: seepage, piping. | Severe: depth to rock, cutbanks cave. | Deep to water | Droughty, fast intake, soil blowing. | Depth to rock, too sandy, soil blowing. | Droughty, depth to rock. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 49: | | | | | | | |
| Bushnell | Moderate: depth to rock. | Severe: hard to pack. | Severe: no water. | Percs slowly, depth to rock. | Wetness, droughty. | Depth to rock, wetness, droughty. | Droughty, depth to rock, percs slowly. |
| Matmon | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| 51: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| Nutall | Moderate: depth to rock. | Severe: thin layer, wetness. | Severe: slow refill, depth to rock, cutbanks cave. | Percs slowly, depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| 52: | | | | | | | |
| Clara, depressional | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| Clara | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Flooding, slow refill, cutbanks cave. | Wetness, cutbanks cave. | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 53--- Bayvi | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: salty water, cutbanks cave. | Flooding, cutbanks cave, excess salt. | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, excess salt, droughty. |
| 54: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Clara | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, cutbanks cave. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty. |
| 55--- Arents | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 57--Sapelo | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, fast intake. | Wetness, too sandy, soil blowing. | Wetness. |
| 58--Leon | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, fast intake. | Wetness, too sandy, soil blowing. | Wetness. |
| 59--Arents | Severe: seepage. | Severe: seepage, piping. | Severe: cutbanks cave. | Subsides, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Droughty. |
| 60: | | | | | | | |
| Chaires | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Meadowbrook | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 61: | | | | | | | |
| Wekiva | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| Tennille | Severe: depth to rock. | Severe: seepage, piping, wetness. | Severe: depth to rock, cutbanks cave. | Depth to rock, cutbanks cave. | Wetness, droughty, fast intake. | Depth to rock, wetness, too sandy. | Wetness, droughty, depth to rock. |
| 62: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: slow refill, cutbanks cave. | Ponding, percs slowly. | Ponding, droughty, fast intake. | Ponding, too sandy. | Wetness, droughty, percs slowly. |
| Tennille | Severe: depth to rock. | Severe: seepage, piping, wetness. | Severe: depth to rock, cutbanks cave. | Depth to rock, cutbanks cave. | Wetness, droughty, fast intake. | Depth to rock, ponding, too sandy. | Wetness, droughty, depth to rock. |
| Wekiva | Severe: depth to rock. | Severe: piping, ponding. | Severe: slow refill, depth to rock. | Ponding, depth to rock. | Ponding, droughty, fast intake. | Depth to rock, ponding, soil blowing. | Wetness, droughty, depth to rock. |
| 63--Steinhatchee | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- | | | Features affecting-- | | | |
|---|---|---|---|---|---|---|---|
| | Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Drainage | Irrigation | Terraces and diversions | Grassed waterways |
| 64: | | | | | | | |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| Wekiva | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| 65: | | | | | | | |
| Yellowjacket | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, subsides, cutbanks cave. | Wetness, flooding. | Wetness, too sandy. | Wetness. |
| Maurepas | Severe: seepage. | Severe: excess humus, ponding. | Slight | Ponding, flooding, subsides. | Ponding, flooding. | Ponding | Wetness. |
| 67: | | | | | | | |
| Yellowjacket | Severe: seepage. | Severe: seepage, piping, ponding. | Severe: cutbanks cave. | Ponding, subsides, cutbanks cave. | Ponding | Ponding, too sandy. | Wetness. |
| Maurepas | Severe: seepage. | Severe: excess humus, ponding. | Slight | Ponding, flooding, subsides. | Ponding, flooding. | Ponding | Wetness. |
| 68: | | | | | | | |
| Matmon | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| Wekiva | Severe: depth to rock. | Severe: piping, wetness. | Severe: slow refill, depth to rock. | Depth to rock, flooding. | Wetness, droughty, fast intake. | Depth to rock, wetness, soil blowing. | Wetness, droughty, depth to rock. |
| Rock outcrop. | | | | | | | |
| 69: | | | | | | | |
| Eunola | Severe: seepage. | Severe: piping, wetness. | Severe: cutbanks cave. | Flooding | Wetness, fast intake. | Wetness, soil blowing. | Favorable. |
| Goldhead | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Flooding, cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| Tooles | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Percs slowly, flooding, cutbanks cave. | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty, percs slowly. |
| 70: | | | | | | | |
| Chiefland | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Droughty, fast intake. | Depth to rock, too sandy, soil blowing. | Droughty, depth to rock. |

Table 13.--Water Management--Continued

| Soil name and map symbol | Limitations for-- Pond reservoir areas | Embankments, dikes, and levees | Aquifer-fed excavated ponds | Features affecting-- Drainage | Irrigation | Terraces and diversions | Grassed waterways |
|---|---|---|---|---|---|---|---|
| 70: Chiefland, frequently flooded | Severe: seepage. | Severe: seepage, piping. | Severe: no water. | Deep to water | Droughty, fast intake. | Depth to rock, too sandy, soil blowing. | Droughty, depth to rock. |
| 71--Leon | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 72--Chaires | Moderate: seepage, depth to rock. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Cutbanks cave | Wetness, droughty, fast intake. | Wetness, too sandy, soil blowing. | Wetness, droughty. |
| 73--Chipley | Severe: seepage. | Severe: seepage. | Severe: cutbanks cave. | Cutbanks cave | Wetness, droughty. | Wetness, too sandy, soil blowing. | Droughty. |
| 74--Mascotte | Severe: seepage. | Severe: seepage, piping, wetness. | Severe: slow refill, cutbanks cave. | Favorable | Wetness, droughty, fast intake. | Wetness, soil blowing. | Wetness, droughty, rooting depth. |

Table 14.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated.)

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 3: | | | | | | | | | | | |
| Clara | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 6-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Osier | 0-5 | Fine sand | SP-SM | A-2, A-3 | 0 | 100 | 98-100 | 60-85 | 5-12 | 0-14 | NP |
| | 5-80 | Coarse sand, sand, fine sand. | SP, SP-SM | A-1, A-3, A-2-4 | 0 | 100 | 90-100 | 40-90 | 2-10 | 0-14 | NP |
| 5 Chaires | 0-20 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 20-30 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-20 | 0-14 | NP |
| | 30-52 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 52-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 100 | 85-100 | 20-35 | 0-40 | NP-20 |
| 6 Leon | 0-6 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 0-25 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 25-34 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 34-80 | Sand, fine sand, loamy sand, loamy fine sand. | SM, SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 3-20 | 0-14 | NP |
| 8 Meadowbrook | 0-9 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-20 |
| 9 Sapelo | 0-28 | Fine sand | SM, SP, SP-SM | A-2, A-3 | 0 | 100 | 100 | 85-100 | 4-20 | 0-14 | NP |
| | 28-45 | Fine sand, sand, loamy fine sand. | SM, SP-SM | A-2, A-3 | 0 | 100 | 100 | 80-100 | 8-20 | 0-14 | NP |
| | 45-60 | Fine sand, sand | SM, SP, SP-SM | A-2, A-3 | 0 | 100 | 100 | 75-100 | 4-20 | 0-14 | NP |
| | 60-80 | Sandy loam, sandy clay loam, fine sandy loam. | SM, SC, SC-SM | A-2, A-4, A-6 | 0 | 100 | 100 | 80-100 | 20-50 | <40 | NP-20 |
| 10: | | | | | | | | | | | |
| Mandarin | 0-26 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-10 | 0-14 | NP |
| | 26-44 | Fine sand, sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 5-15 | 0-14 | NP |
| | 44-80 | Fine sand, sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-7 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 10: | | | | | | | | | | | |
| Hurricane | 0-8 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 2-8 | 0-14 | NP |
| | 8-63 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 2-8 | 0-14 | NP |
| | 63-69 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |
| | 69-80 | Sand, fine sand | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 4-15 | 0-14 | NP |
| 12 | 0-5 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 3-8 | 0-14 | NP |
| Ortega | 5-80 | Fine sand, sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-7 | 0-14 | NP |
| 13 | 0-8 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 4-8 | 0-14 | NP |
| Hurricane | 8-63 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 4-8 | 0-14 | NP |
| | 63-69 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |
| | 69-80 | Sand, fine sand | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 4-15 | 0-14 | NP |
| 14: | | | | | | | | | | | |
| Chipley | 0-9 | Fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-12 | 0-14 | NP |
| | 9-80 | Sand, fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-12 | 0-14 | NP |
| Lynn Haven | 0-13 | Mucky fine sand | SM, SP, | A-2-4, | 0 | 100 | 100 | 85-100 | 4-15 | 0-14 | NP |
| | 13-19 | Sand, fine sand | SP-SM, SP, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-14 | --- | NP |
| | 19-34 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-20 | --- | NP |
| | 34-52 | Sand, fine sand | SP-SM, SP, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-14 | --- | NP |
| | 52-80 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-20 | --- | NP |
| Boulogne | 0-5 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 3-10 | 0-14 | NP |
| | 5-14 | Sand, fine sand, loamy sand, loamy fine sand. | SM, SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 3-20 | 0-14 | NP |
| | 14-80 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 3-10 | 0-14 | NP |
| 15 | 0-9 | Fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 5-12 | 0-14 | NP |
| Ridgewood | 9-80 | Fine sand, sand | SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 2-12 | 0-14 | NP |
| 16 | 0-8 | Fine sand | SP, SP-SM | A-3 | 0-3 | 99-100 | 99-100 | 85-100 | 2-5 | 0-14 | NP |
| Lutterloh | 8-51 | Sand, fine sand | SP, SP-SM | A-3 | 0-3 | 99-100 | 99-100 | 85-100 | 2-5 | 0-14 | NP |
| | 51-80 | Fine sandy loam, very fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6, A-4, A-6 | 0-3 | 99-100 | 99-100 | 85-100 | 25-40 | <35 | NP-20 |
| Ridgewood | 0-9 | Fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 5-12 | 0-14 | NP |
| | 9-80 | Fine sand, sand | SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 2-12 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 17: | | | | | | | | | | | |
| Ousley | 0-4 | Fine sand | SP-SM, SM | A-2, A-3 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 4-80 | Sand, fine sand, coarse sand. | SP-SM, SM, SP | A-1, A-2, A-3 | 0 | 100 | 95-100 | 36-99 | 2-15 | 0-14 | NP |
| Leon | 0-25 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 25-34 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 34-80 | Sand, fine sand, loamy fine sand. | SM, SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 3-20 | 0-14 | NP |
| Clara | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 6-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| 19: | | | | | | | | | | | |
| Otela | 0-47 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 97-100 | 95-100 | 75-100 | 5-15 | 0-14 | NP |
| | 47-63 | Sandy clay loam, fine sandy loam, loamy fine sand. | SC, SC-SM, SM | A-2-6, A-2-4, A-4, A-6 | 0 | 97-100 | 95-100 | 75-100 | 20-50 | <40 | NP-15 |
| | 63-80 | Sandy clay loam, sandy clay, clay. | SC, CL, CH | A-6, A-7 | 0-5 | 97-100 | 95-100 | 75-100 | 45-95 | 35-65 | 20-39 |
| Ortega | 0-5 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 3-8 | 0-14 | NP |
| | 5-80 | Fine sand, sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-7 | 0-14 | NP |
| Lutterloh | 0-8 | Fine sand | SP, SP-SM | A-3 | 0-3 | 99-100 | 99-100 | 85-100 | 2-5 | 0-14 | NP |
| | 8-51 | Sand, fine sand | SP, SP-SM | A-3 | 0-3 | 99-100 | 99-100 | 85-100 | 2-5 | 0-14 | NP |
| | 51-80 | Fine sandy loam, very fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6, A-4, A-6 | 0-3 | 99-100 | 99-100 | 85-100 | 25-40 | <35 | NP-20 |
| 20: | | | | | | | | | | | |
| Melvina | 0-6 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 6-28 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 28-39 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 39-53 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 53-67 | Fine sandy loam, sandy clay loam, sandy loam. | SM, SC-SM, SC | A-2, A-4, A-6 | 0 | 100 | 100 | 70-100 | 30-50 | <40 | NP-20 |
| | 67-80 | Sandy clay | SC | A-7 | 0 | 100 | 100 | 70-100 | 40-50 | 20-60 | 11-30 |
| Mandarin | 0-26 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-10 | 0-14 | NP |
| | 26-44 | Fine sand, sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 5-15 | 0-14 | NP |
| | 44-80 | Fine sand, sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-100 | 2-7 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 21---------- Kershaw | 0-80 | Fine sand-------- | SP, SP-SM, SW | A-2, A-3 | 0 | 98-100 | 98-100 | 50-80 | 1-7 | 0-14 | NP |
| 22---------- Ocilla | 0-28 | Sand---------- | SM, SP-SM | A-2, A-3 | 0 | 100 | 95-100 | 70-100 | 8-35 | 0-14 | NP |
| | 28-68 | Sandy loam, sandy clay loam, fine sandy loam. | SM, CL, SC, ML | A-2, A-4, A-6 | 0 | 100 | 95-100 | 80-100 | 20-55 | 20-40 | NP-18 |
| | 68-80 | Sandy clay loam, sandy loam, fine sandy loam. | SC, CL | A-4, A-6, A-7 | 0 | 100 | 95-100 | 80-100 | 36-60 | 20-45 | 7-20 |
| 23: | | | | | | | | | | | |
| Melvina--------- | 0-6 | Fine sand-------- | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 6-28 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 28-39 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 39-53 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 53-67 | Fine sandy loam, sandy clay loam, sandy loam. | SM, SC-SM, SC | A-2, A-4, A-6 | 0 | 100 | 100 | 70-100 | 30-50 | <40 | NP-20 |
| | 67-80 | Sandy clay | SC | A-7 | 0 | 100 | 100 | 70-100 | 40-50 | 20-60 | 11-30 |
| Moriah---------- | 0-5 | Fine sand-------- | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 5-34 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 34-57 | Fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 100 | 90-100 | 20-35 | <38 | NP-20 |
| | 57 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lutterloh------- | 0-51 | Sand, fine sand | SP, SP-SM | A-3 | 0-3 | 99-100 | 99-100 | 85-100 | 2-5 | 0-14 | NP |
| | 51-64 | Fine sandy loam, very fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6, A-4, A-6 | 0-3 | 99-100 | 99-100 | 85-100 | 25-40 | <35 | NP-20 |
| 24---------- Albany | 0-50 | Sand, fine sand | SM, SP-SM | A-2 | 0 | 100 | 100 | 75-90 | 10-20 | 0-14 | NP |
| | 50-80 | Sandy clay loam, sandy loam, fine sandy loam. | SC, SM, SC-SM | A-2, A-4, A-6 A-7-6 | 0 | 97-100 | 95-100 | 70-100 | 20-50 | <43 | NP-23 |
| 25---------- Pottsburg | 0-6 | Fine sand-------- | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-100 | 2-10 | 0-14 | NP |
| | 6-52 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-100 | 1-8 | 0-14 | NP |
| | 52-80 | Sand, fine sand, loamy fine sand. | SP-SM, SP, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 4-18 | 0-14 | NP |
| 26: | | | | | | | | | | | |
| Resota---------- | 0-80 | Sand---------- | SP, SM, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-99 | 1-15 | 0-14 | NP |
| Hurricane------- | 0-8 | Fine sand-------- | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 2-8 | 0-14 | NP |
| | 8-63 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 78-100 | 2-8 | 0-14 | NP |
| | 63-69 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |
| | 69-80 | Sand, fine sand | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 90-100 | 4-15 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 27---------- Plummer | 0-55 | Fine sand-------- | SM, SP-SM | A-2-4, A-3 | 0 | 100 | 95-100 | 75-90 | 5-25 | 0-14 | NP |
| | 55-80 | Sandy loam, sandy clay loam, fine sandy loam. | SM, SC, SC-SM | A-2-4, A-4 | 0 | 100 | 97-100 | 76-96 | 20-48 | <30 | NP-10 |
| 28: | | | | | | | | | | | |
| Surrency-------- | 0-16 | Mucky fine sand | SP-SM, SM, SC-SM | A-3, A-2-4 | 0 | 100 | 95-100 | 50-100 | 5-20 | 0-20 | NP-5 |
| | 16-38 | Loamy fine sand, sand, fine sand. | SP-SM, SM | A-2-4 | 0 | 100 | 95-100 | 50-100 | 10-26 | 0-14 | NP |
| | 38-80 | Fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2 | 0 | 100 | 95-100 | 75-100 | 22-35 | 0-30 | NP-10 |
| Starke---------- | 0-6 | Mucky fine sand | SP-SM, SP, SM | A-3, A-2 | 0 | 95-100 | 92-100 | 85-98 | 3-15 | 0-20 | NP |
| | 6-51 | Sand, fine sand | SP, SP-SM, SM | A-3, A-2 | 0 | 95-100 | 92-100 | 85-98 | 3-15 | 0-20 | NP |
| | 51-80 | Sandy loam, fine sandy loam, sandy clay loam. | SC-SM, SC | A-2, A-4, A-6 | 0 | 95-100 | 92-100 | 85-98 | 16-46 | 16-40 | 4-20 |
| Croatan--------- | 0-25 | Muck------------- | PT | --- | 0 | --- | --- | --- | --- | --- | --- |
| | 25-39 | Sandy loam, fine sandy loam, mucky fine sandy loam. | SM, SC, SC-SM | A-2, A-4 | 0 | 100 | 100 | 60-85 | 30-49 | 25-35 | NP-10 |
| | 39-80 | Loam, clay loam, sandy clay loam. | CL, CL-ML, SC, SC-SM | A-4, A-6 | 0 | 100 | 100 | 75-100 | 36-95 | 18-45 | 4-15 |
| 29: | | | | | | | | | | | |
| Albany---------- | 0-50 | Mucky fine sand | SM, SP-SM | A-2 | 0 | 100 | 100 | 75-90 | 10-20 | 0-14 | NP |
| | 50-80 | Sandy clay loam, sandy loam, fine sandy loam. | SC, SM, SC-SM | A-2, A-4, A-6, A-7 | 0 | 97-100 | 95-100 | 70-100 | 20-50 | <43 | NP-23 |
| Surrency-------- | 0-16 | Mucky fine sand | SP-SM, SM, SC-SM | A-3, A-2-4 | 0 | 100 | 95-100 | 50-100 | 5-20 | 0-20 | NP-5 |
| | 16-35 | Loamy fine sand, sand, fine sand. | SP-SM, SM | A-2-4 | 0 | 100 | 95-100 | 50-100 | 10-26 | 0-14 | NP |
| | 35-80 | Fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2 | 0 | 100 | 95-100 | 75-100 | 22-35 | 0-30 | NP-10 |
| 30: | | | | | | | | | | | |
| Dorovan--------- | 0-4 | Muck------------- | PT | --- | 0 | --- | --- | --- | --- | --- | --- |
| | 4-72 | Muck------------- | PT | --- | 0 | --- | --- | --- | --- | --- | --- |
| | 72-80 | Fine sand, loam, loamy fine sand. | SP-SM, SC-SM, SM | A-1, A-3, A-4, A-2-4 | 0 | 100 | 100 | 5-70 | 5-49 | <20 | NP-7 |
| Pamlico--------- | 0-22 | Muck------------- | PT | --- | 0 | --- | --- | --- | --- | --- | --- |
| | 22-65 | Sand, fine sand, loamy fine sand. | SM, SP-SM | A-2, A-3 | 0 | 100 | 100 | 70-99 | 5-20 | 0-14 | NP |
| 33: | | | | | | | | | | | |
| Wesconnett------ | 0-10 | Fine sand, sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |
| | 10-40 | Fine sand, sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-12 | 0-14 | NP |
| | 40-80 | Fine sand, sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 33: | | | | | | | | | | | |
| Evergreen------- | 0-9 | Muck---------- | PT | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9-21 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-100 | 1-10 | 0-14 | NP |
| | 21-50 | Sand, fine sand, loamy fine sand. | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-100 | 1-10 | 0-14 | NP |
| | 50-80 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-100 | 1-10 | 0-14 | NP |
| Pamlico--------- | 0-22 | Muck---------- | PT | --- | 0 | --- | --- | --- | --- | --- | --- |
| | 22-65 | Sand, fine sand, loamy fine sand. | SM, SP-SM | A-2, A-3 | 0 | 100 | 100 | 70-95 | 5-20 | 0-14 | NP |
| 34: | | | | | | | | | | | |
| Clara----------- | 0-6 | Mucky fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 6-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Bodiford-------- | 0-12 | Muck---------- | PT, OH | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12-18 | Mucky sand, mucky fine sand, mucky loamy fine sand. | SP, SM, SP-SM | A-2 | 0 | 100 | 98-100 | 70-95 | 10-30 | 0-14 | NP |
| | 18-29 | Sand, fine sand, loamy fine sand. | SP, SM, SP-SM | A-3, A-2-4 | 0 | 100 | 98-100 | 70-95 | 5-30 | 0-14 | NP |
| | 29-51 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6, A-6 | 0 | 100 | 98-100 | 70-95 | 20-40 | 25-30 | 11-15 |
| | 51 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35: | | | | | | | | | | | |
| Tooles---------- | 0-7 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 20-55 | 20-30 | 5-15 |
| | 65 | Unweathered bedrock. | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meadowbrook----- | 0-9 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-20 |
| Wekiva---------- | 0-6 | Fine sand-------- | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 37: | | | | | | | | | | | |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meadowbrook | 0-9 | Sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM | A-2-4 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-10 |
| 38: | | | | | | | | | | | |
| Clara | 0-7 | Mucky fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 7-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Meadowbrook | 0-9 | Sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM | A-2-4 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-10 |
| 40 | 0-51 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 2-5 | 0-14 | NP |
| Lutterloh | 51-64 | Fine sandy loam, very fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6, A-4, A-6 | 0 | 100 | 100 | 85-100 | 25-40 | <35 | NP-20 |
| | 64 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 41: | | | | | | | | | | | |
| Tooles | 0-8 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 8-35 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 35-46 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 46 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meadowbrook | 0-9 | Sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Loamy fine sand, sandy loam, fine sandy loam. | SM, SC-SM | A-2-4 | 0 | 100 | 95-100 | 70-99 | 15-30 | <25 | NP-7 |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 45---------- | 0-8 | Fine sand-------- | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| Chaires | 8-18 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 18-35 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-20 | 0-14 | NP |
| | 35-61 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 100 | 85-100 | 20-35 | <40 | NP-20 |
| | 61 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 46. Pits | | | | | | | | | | | |
| 48: | | | | | | | | | | | |
| Wekiva---------- | 0-6 | Fine sand-------- | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tennille-------- | 0-6 | Fine sand-------- | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SP, SP-SM | A-3, A-2-4 | 0-5 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tooles---------- | 0-8 | Fine sand-------- | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 8-35 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 35-46 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 11-55 |
| | 46 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 49: | | | | | | | | | | | |
| Seaboard-------- | 0-3 | Fine sand-------- | SP-SM, SP | A-3, A-2-4 | 0-2 | 100 | 95-100 | 85-100 | 2-12 | 0-14 | NP |
| | 3-8 | Sand, fine sand | SP-SM, SP | A-3, A-2-4 | 0-5 | 100 | 95-100 | 85-100 | 2-12 | 0-14 | NP |
| | 8 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bushnell-------- | 0-10 | Fine sand, loamy fine sand. | SP-SM SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 95-100 | 5-20 | 0-14 | NP |
| | 10-14 | Fine sand, loamy fine sand. | SP-SM SM | A-3 A-2-4 | 0-3 | 98-100 | 98-100 | 95-100 | 5-20 | 0-14 | NP |
| | 14-30 | Sandy clay, clay | CL, CH | A-7 | 0-5 | 90-100 | 90-100 | 90-100 | 55-80 | 45-80 | 20-50 |
| | 30 | Soft limestone | | | | | | | | | |
| Matmon---------- | 0-11 | Fine sand-------- | SM, SP-SM | A-3, A-2-4 | 0-5 | 99-100 | 99-100 | 98-100 | 5-18 | 0-14 | NP |
| | 11-19 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-2-4, A-2-6, A-4, A-6 | 0-5 | 99-100 | 99-100 | 95-100 | 25-50 | <40 | NP-24 |
| | 19 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 51: | | | | | | | | | | | |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nutall | 0-17 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 17-30 | Sandy clay loam, clay loam. | SC | A-2-6, A-6 | 0 | 100 | 100 | 85-99 | 30-45 | 25-35 | 11-20 |
| | 30 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 52: | | | | | | | | | | | |
| Clara, depressional | 0-2 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 2-37 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 37-50 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 50-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Clara | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 6-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Meadowbrook | 0-9 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-20 |
| 53 | 0-5 | Muck | PT | --- | --- | --- | --- | --- | --- | --- | --- |
| Bayvi | 5-17 | Mucky loamy fine sand, mucky fine sand, sand. | SM, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-20 | 0-14 | NP |
| | 17-80 | Loamy fine sand, fine sand, sand. | SM, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-20 | 0-14 | NP |
| 54: | | | | | | | | | | | |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meadowbrook | 0-9 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 9-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 70-95 | 2-10 | 0-14 | NP |
| | 58-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 95-100 | 70-99 | 13-35 | <35 | NP-20 |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 54: | | | | | | | | | | | |
| Clara | 0-6 | Mucky fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 85-100 | 1-5 | 0-14 | NP |
| | 6-19 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 19-32 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 32-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| 55 | 0-10 | Fine sand | SP, SP-SM | A-3, A-2-4, A-1-b | 0-15 | 60-90 | 50-80 | 40-70 | 2-12 | 0-14 | NP |
| Arents | | | | | | | | | | | |
| | 10-22 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-95 | 2-12 | 0-14 | NP |
| | 22-60 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-95 | 2-12 | 0-14 | NP |
| 57 | 0-8 | Fine sand | SM, SP, | A-2-4 | 0 | 100 | 100 | 85-100 | 4-15 | 0-14 | NP |
| Sapelo | 8-18 | Fine sand | SM, SP, SP-SM | A-2, A-3 | 0 | 100 | 100 | 85-100 | 4-20 | 0-14 | NP |
| | 18-32 | Sand, fine sand, loamy fine sand. | SM, SP-SM | A-2, A-3 | 0 | 100 | 100 | 80-100 | 8-20 | 0-14 | NP |
| | 32-46 | Fine sand, sand | SM, SP, SP-SM | A-2, A-3 | 0 | 100 | 100 | 75-100 | 4-20 | 0-14 | NP |
| | 46-80 | Sandy loam, sandy clay loam, fine sandy loam. | SM, SC, SC-SM | A-2, A-4, A-6 | 0 | 100 | 100 | 80-100 | 20-50 | <40 | NP-20 |
| 58 | 0-6 | Mucky fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| Leon | | | | | | | | | | | |
| | 6-10 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 10-42 | Sand, fine sand, loamy fine sand. | SM, SP-SM, SP | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 3-20 | 0-14 | NP |
| | 42-65 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 65-80 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| 59 | 0-24 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 80-90 | 2-10 | 0-14 | NP |
| Arents | 24-60 | Variable | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 60: | | | | | | | | | | | |
| Chaires | 0-8 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 8-18 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 18-35 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-20 | 0-14 | NP |
| | 35-61 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 100 | 85-100 | 20-35 | <40 | NP-20 |
| | 61 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meadowbrook | 0-3 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 95-100 | 2-10 | 0-14 | NP |
| | 3-58 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 100 | 95-100 | 95-100 | 2-10 | 0-14 | NP |
| | 58-75 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM | A-2-4 | 0 | 95-99 | 90-99 | 85-100 | 15-40 | 0-30 | 5-20 |
| | 75 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 61: | | | | | | | | | | | |
| Wekiva | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tennille | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SP, SP-SM | A-3, A-2-4 | 0-5 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 62: | | | | | | | | | | | |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 | 0 | 100 | 100 | 85-95 | 36-55 | 25-30 | 11-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tennille | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SP, SP-SM | A-3, A-2-4 | 0-5 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Wekiva | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 63--- Steinhatchee | 0-5 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 5-18 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 18-29 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 70-100 | 5-25 | 0-14 | NP |
| | 29-35 | Fine sandy loam, sandy clay loam, sandy loam. | SM, SC-SM, SC | A-2, A-4, A-6 | 0-1 | 99-100 | 98-100 | 60-100 | 30-50 | <40 | NP-20 |
| | 35 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 64: | | | | | | | | | | | |
| Tooles | 0-8 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 8-35 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 35-55 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 55 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Wekiva | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-20 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 65: | | | | | | | | | | | |
| Yellowjacket | 0-42 | Muck | PT | --- | --- | --- | --- | --- | --- | --- | NP |
| | 42-60 | Mucky sand, mucky fine sand, mucky loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-20 | NP |
| | 60-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-20 | NP |
| Maurepas | 0-65 | Muck | PT | A-8 | 0 | --- | --- | --- | --- | --- | --- |
| 67: | | | | | | | | | | | |
| Yellowjacket | 0-42 | Muck | PT | A-8 | --- | --- | --- | --- | --- | --- | NP |
| | 42-60 | Mucky sand, mucky fine sand, mucky loamy fine sand | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 95-100 | 2-16 | 0-14 | NP |
| | 60-80 | Sand, fine sand, loamy fine sand. | SP, SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-16 | 0-14 | NP |
| Maurepas | 0-65 | Muck | PT | A-8 | 0 | --- | --- | --- | --- | --- | --- |
| 68: | | | | | | | | | | | |
| Matmon | 0-11 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-5 | 99-100 | 99-100 | 98-100 | 5-18 | 0-14 | NP |
| | 11-19 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-2-4, A-2-6, A-4, A-6 | 0-5 | 99-100 | 99-100 | 95-100 | 25-50 | <40 | NP-24 |
| | 19 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Wekiva | 0-6 | Fine sand | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 6-14 | Fine sand, loamy fine sand. | SM, SP-SM | A-3, A-2-4 | 0-3 | 98-100 | 98-100 | 98-100 | 6-18 | 0-14 | NP |
| | 14-21 | Fine sandy loam, sandy clay loam. | SC, SC-SM, SM | A-6, A-2-4, A-4, A-2-6 | 0-5 | 98-100 | 98-100 | 85-100 | 20-45 | <40 | NP-24 |
| | 21 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock outcrop | 0 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | 3-10 inches | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 69: | | | | | | | | | | | |
| Eunola | 0-6 | Fine sand | SM, SP-SM | A-2, A-4, A-2-4 | 0 | 100 | 98-100 | 50-80 | 10-38 | 0-14 | NP |
| | 6-15 | Sandy clay loam, clay loam, fine sandy loam. | SM, SC, SC-SM, CL | A-4, A-2, A-6 | 0 | 100 | 90-100 | 75-95 | 30-60 | <36 | NP-15 |
| | 15-40 | Sandy clay loam, sandy clay, clay loam. | SM, SC, ML, CL | A-4, A-6, A-7 | 0 | 100 | 98-100 | 80-95 | 36-60 | 22-50 | 3-26 |
| | 40-50 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC, SC-SM | A-2, A-4 | 0 | 100 | 98-100 | 60-70 | 30-40 | <30 | NP-10 |
| | 50-80 | Sand, loamy fine sand, fine sand. | SM, SP-SM | A-2, A-3 | 0 | 100 | 98-100 | 50-75 | 5-30 | 0-20 | NP |
| Goldhead | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 100 | 100 | 90-99 | 2-6 | 0-14 | NP |
| | 6-35 | Sand, fine sand | SP, SP-SM | A-3 | 0 | 95-100 | 90-100 | 90-99 | 2-6 | 0-14 | NP |
| | 35-80 | Fine sandy loam, gravelly sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0-3 | 75-100 | 65-100 | 60-95 | 15-35 | 20-40 | NP-25 |
| Tooles | 0-7 | Fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 7-52 | Sand, fine sand | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-95 | 5-15 | 0-14 | NP |
| | 52-65 | Sandy clay loam, clay loam. | SC, CL | A-6 A-2-6 | 0 | 100 | 100 | 85-95 | 36-55 | 20-30 | 5-15 |
| | 65 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 70: | | | | | | | | | | | |
| Chiefland | 0-5 | Fine sand | SP-SM, SM | A-2-4, A-3 | 0-4 | 96-100 | 96-100 | 80-95 | 5-15 | 0-14 | NP |
| | 5-26 | Sand, fine sand | SP-SM, SM | A-2-4, A-3 | 0 | 100 | 100 | 80-95 | 5-15 | 0-14 | NP |
| | 26-35 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC | A-2-4, A-2-6 | 0-10 | 90-100 | 85-100 | 80-95 | 20-35 | 25-40 | NP-15 |
| | 35 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chiefland, frequently flooded | 0-5 | Fine sand | SP-SM, SM | A-2-4, A-3 | 0-4 | 96-100 | 96-100 | 80-95 | 5-15 | 0-14 | NP |
| | 5-26 | Sand, fine sand | SP-SM, SM | A-2-4, A-3 | 0 | 100 | 100 | 80-95 | 5-15 | 0-14 | NP |
| | 26-35 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC | A-2-4, A-2-6 | 0-10 | 90-100 | 85-100 | 80-95 | 20-35 | 25-40 | NP-15 |
| | 35 | Soft limestone | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 71--- Leon | 0-6 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 6-25 | Fine sand, sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 25-34 | Fine sand, sand, loamy fine sand. | SP, SM, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 3-20 | 0-14 | NP |
| | 34-80 | Fine sand, sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |

Table 14.--Engineering Index Properties--Continued

| Soil name and map symbol | Depth | USDA texture | Classification | | Frag-ments 3-10 inches | Percentage passing sieve number-- | | | | Liquid limit | Plas-ticity index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unified | AASHTO | | 4 | 10 | 40 | 200 | | |
| | In | | | | Pct | | | | | Pct | |
| 72--Chaires | 0-6 | Fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 2-12 | 0-14 | NP |
| | 6-20 | Sand, fine sand | SP, SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
| | 20-52 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-20 | 0-14 | NP |
| | 52-80 | Sandy loam, fine sandy loam, sandy clay loam. | SM, SC-SM, SC | A-2-4, A-2-6 | 0 | 100 | 100 | 85-100 | 20-35 | <40 | NP-20 |
| 73--Chipley | 0-9 | Sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-12 | 0-14 | NP |
| | 9-80 | Sand, fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 80-100 | 5-12 | 0-14 | NP |
| 74--Mascotte | 0-4 | Sand, fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-12 | 0-14 | NP |
| | 4-10 | Sand, fine sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-12 | 0-14 | NP |
| | 10-17 | Sand, fine sand, loamy fine sand. | SP-SM, SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 8-15 | 0-14 | NP |
| | 17-30 | Fine sand, sand | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-12 | 0-14 | NP |
| | 30-35 | Fine sandy loam, sand, loamy fine sand. | SP-SM | A-3, A-2-4 | 0 | 100 | 100 | 85-100 | 5-12 | 0-14 | NP |
| | 35-80 | Sandy clay loam, sandy loam, fine sandy loam. | SC, SC-SM, SM | A-2, A-4, A-6 | 0 | 100 | 100 | 85-100 | 19-45 | <38 | NP-15 |

Table 15.--Physical and Chemical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated.)

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 3: | | | | | | | | | | | | |
| Clara | 0-6 | 0-4 | 1.40-1.55 | 6.0-20 | 0.15-0.20 | 5.1-6.0 | <2 | Low | 0.10 | 5 | 1 | 1-8 |
| | 6-19 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-6.0 | <2 | Low | 0.10 | | | |
| | 19-32 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 5.1-6.0 | <2 | Low | 0.10 | | | |
| | 32-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 5.1-6.0 | <2 | Low | 0.10 | | | |
| Osier | 0-5 | 1-10 | 1.35-1.65 | 6.0-20 | 0.03-0.11 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 2 | 2-5 |
| | 5-80 | 1-5 | 1.40-1.70 | 6.0-20 | 0.02-0.06 | 3.6-6.0 | <2 | Low | 0.05 | | | |
| 5 | 0-20 | 1-3 | 1.10-1.65 | 6.0-20 | 0.05-0.15 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 1 | 2-6 |
| Chaires | 20-30 | 3-10 | 1.35-1.50 | 0.6-2.0 | 0.10-0.15 | 3.6-5.5 | <2 | Low | 0.15 | | | |
| | 30-52 | 0-5 | 1.35-1.55 | 6.0-20 | 0.03-0.08 | 3.6-5.5 | <2 | Low | 0.10 | | | |
| | 52-80 | 2-35 | 1.25-1.70 | 0.06-0.6 | 0.15-0.27 | 3.6-6.0 | <2 | Low | 0.20 | | | |
| 6 | 0-25 | 0-5 | 1.15-1.65 | 6.0-20 | 0.05-0.15 | 3.6-6.5 | 0-2 | Low | 0 | 5 | 1 | .5-4 |
| Leon | 25-34 | 0-3 | 1.40-1.65 | 0.6-6.0 | 0.02-0.15 | 3.6-6.5 | 0-2 | Low | 0 | | | |
| | 34-80 | 1-8 | 1.25-1.76 | 0.2-20 | 0.07-0.30 | 3.6-6.5 | 0-2 | Low | 5 | | | |
| 8 | 0-9 | 0-3 | 1.35-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| Meadowbrook | 9-58 | 0-6 | 1.35-1.65 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | 0.10 | | | |
| | 58-80 | 9-24 | 1.35-1.80 | 0.2-2.0 | 0.10-0.25 | 4.5-8.4 | <2 | Low | 0.15 | | | |
| 9 | 0-28 | 0-5 | 1.25-1.65 | 6.0-20 | 0.03-0.07 | 3.6-5.5 | <2 | Low | 0.10 | 5 | 1 | 1-3 |
| Sapelo | 28-45 | 3-7 | 1.35-1.60 | 0.6-2.0 | 0.10-0.15 | 3.6-5.5 | <2 | Low | 0.15 | | | |
| | 45-60 | 3-6 | 1.50-1.70 | 6.0-20 | 0.03-0.07 | 3.6-5.5 | <2 | Low | 0.17 | | | |
| | 60-80 | 10-30 | 1.55-1.76 | 0.2-2.0 | 0.12-0.17 | 3.6-5.5 | <2 | Low | 0.24 | | | |
| 10: | | | | | | | | | | | | |
| Mandarin | 0-26 | 0-3 | 1.35-1.45 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 26-44 | 2-9 | 1.45-1.60 | 0.6-2.0 | 0.10-0.15 | 3.6-6.0 | <2 | Low | 0.15 | | | |
| | 44-80 | 0-3 | 1.35-1.60 | 6.0-20 | 0.03-0.07 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| Hurricane | 0-8 | 1-4 | 1.35-1.60 | 6.0-20 | 0.03-0.09 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 8-63 | 0-4 | 1.40-1.60 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 63-69 | 1-8 | 1.55-1.65 | 2.0-6.0 | 0.05-0.15 | 3.6-6.0 | <2 | Low | 0.15 | | | |
| | 69-80 | 1-4 | 1.40-1.65 | 2.0-20 | 0.03-0.10 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| 12 | 0-5 | 1-3 | 1.20-1.45 | 6.0-20 | 0.05-0.08 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 2 | <2 |
| Ortega | 5-80 | 1-3 | 1.35-1.60 | 6.0-20 | 0.03-0.06 | 3.6-6.5 | <2 | Low | 0.10 | | | |
| 13 | 0-8 | 1-4 | 1.35-1.60 | 6.0-20 | 0.03-0.09 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 2 | <2 |
| Hurricane | 8-63 | 0-4 | 1.40-1.60 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 63-69 | 2-8 | 1.55-1.65 | 2.0-20 | 0.05-0.15 | 3.6-6.0 | <2 | Low | 0.15 | | | |
| | 69-80 | 1-4 | 1.40-1.65 | 2.0-20 | 0.03-0.10 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| 14: | | | | | | | | | | | | |
| Chipley | 0-9 | 1-5 | 1.35-1.50 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 1 | 2-5 |
| | 9-80 | 1-7 | 1.45-1.75 | 6.0-20 | 0.03-0.08 | 4.5-6.5 | <2 | Low | 0.10 | | | |
| Lynn Haven | 0-13 | 1-4 | 1.30-1.60 | 6.0-20 | 0.10-0.15 | 3.6-5.5 | <2 | Low | 0.10 | 5 | 1 | 5-15 |
| | 13-19 | 0-4 | 1.40-1.55 | 6.0-20 | 0.05-0.07 | 3.6-5.5 | <2 | Low | 0.20 | | | |
| | 19-34 | 2-8 | 1.50-1.65 | 0.6-6.0 | 0.15-0.30 | 3.6-5.5 | <2 | Low | 0.10 | | | |
| | 34-52 | 0-4 | 1.40-1.55 | 6.0-20 | 0.05-0.07 | 3.6-5.5 | <2 | Low | 0.20 | | | |
| | 52-80 | 2-8 | 1.50-1.65 | 0.6-6.0 | 0.15-0.30 | 3.6-5.5 | <2 | Low | 0.10 | | | |
| Boulogne | 0-5 | 1-5 | 1.30-1.55 | 6.0-20 | 0.10-0.15 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 1 | 1-5 |
| | 5-14 | 0-3 | 1.50-1.60 | 2.0-6.0 | 0.10-0.15 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 14-80 | 2-8 | 1.50-1.70 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low | 0.10 | 5 | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 15---------- | 0-9 | 1-3 | 1.35-1.55 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low------- | 0.10 | 5 | 1 | <2 |
| Ridgewood | 9-80 | 0-5 | 1.35-1.65 | 6.0-20 | 0.03-0.08 | 4.5-7.3 | <2 | Low------- | 0.10 | | | |
| 16: | | | | | | | | | | | | |
| Lutterloh------- | 0-8 | 1-5 | 1.35-1.50 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low------- | 0.10 | 5 | 1 | .5-3 |
| | 8-51 | 0-5 | 1.45-1.60 | 6.0-20 | 0.02-0.05 | 3.6-6.0 | <2 | Low------- | 0.10 | | | |
| | 51-80 | 10-30 | 1.60-1.75 | 0.06-2.0 | 0.10-0.15 | 3.6-7.3 | <2 | Low------- | 0.24 | | | |
| Ridgewood------- | 0-9 | 0-3 | 1.35-1.55 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low------- | 0.10 | 5 | 1 | <2 |
| | 9-80 | 0-5 | 1.35-1.65 | 6.0-20 | 0.03-0.08 | 4.5-7.3 | <2 | Low------- | 0.10 | | | |
| 17: | | | | | | | | | | | | |
| Ousley---------- | 0-4 | 1-3 | 1.35-1.45 | 6.0-20 | 0.05-0.10 | 4.5-6.0 | <2 | Low------- | 0.10 | 5 | 1 | <.5 |
| | 4-80 | 1-2 | 1.45-1.60 | 6.0-20 | 0.02-0.06 | 4.5-6.0 | <2 | Low------- | 0.15 | | | |
| Leon------------ | 0-25 | 1-5 | 1.30-1.45 | 6.0-20 | 0.05-0.15 | 3.6-6.5 | 0-2 | Low------- | 0 | 5 | 1 | .5-4 |
| | 25-34 | 0-3 | 1.40-1.60 | 6.0-20 | 0.02-0.05 | 3.6-6.5 | 0-2 | Low------- | 0 | | | |
| | 34-80 | 2-8 | 1.25-1.65 | 0.6-6.0 | 0.15-0.30 | 3.6-6.5 | 0-2 | Low------- | 5 | | | |
| Clara----------- | 0-9 | 0-4 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low------- | 0.10 | 5 | 1 | 1-8 |
| | 9-29 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low------- | 0.10 | | | |
| | 29-46 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 5.1-8.4 | <2 | Low------- | 0.10 | | | |
| | 46-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 5.1-8.4 | <2 | Low------- | 0.10 | | | |
| 19: | | | | | | | | | | | | |
| Otela----------- | 0-47 | 0-5 | 1.45-1.65 | 6.0-20 | 0.05-0.16 | 4.5-7.3 | <2 | Low------- | 0.10 | 5 | 1 | <3 |
| | 47-63 | 8-35 | 1.55-1.75 | 0.2-2.0 | 0.06-0.20 | 3.6-7.8 | <2 | Low------- | 0.20 | | | |
| | 63-80 | 30-65 | 1.55-1.75 | 0.06-0.6 | 0.08-0.20 | 3.6-8.4 | <2 | Moderate | 0.24 | | | |
| Ortega---------- | 0-5 | 0-3 | 1.20-1.50 | 6.0-20 | 0.05-0.08 | 3.6-6.5 | <2 | Low------- | 0.10 | 5 | 2 | <2 |
| | 5-80 | 0-3 | 1.35-1.60 | 6.0-20 | 0.03-0.06 | 3.6-6.5 | <2 | Low------- | 0.10 | | | |
| Lutterloh------- | 0-8 | 1-5 | 1.35-1.50 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low------- | 0.10 | 5 | 1 | .5-3 |
| | 8-51 | 0-5 | 1.45-1.66 | 6.0-20 | 0.02-0.05 | 3.6-6.0 | <2 | Low------- | 0.10 | | | |
| | 51-80 | 10-30 | 1.60-1.75 | 0.06-2.0 | 0.10-0.15 | 3.6-7.3 | <2 | Low------- | 0.24 | | | |
| 20: | | | | | | | | | | | | |
| Melvina--------- | 0-6 | 0-3 | 1.35-1.47 | 6.0-20 | 0.05-0.15 | 3.6-6.5 | <2 | Low------- | 0.10 | 5 | 1 | 1-3 |
| | 6-28 | 0-3 | 1.35-1.60 | 6.0-20 | 0.02-0.05 | 3.6-6.5 | <2 | Low------- | 0.10 | | | |
| | 28-39 | 1-8 | 1.45-1.60 | 2.0-6.0 | 0.10-0.15 | 4.5-7.3 | <2 | Low------- | 0.15 | | | |
| | 39-53 | 0-3 | 1.35-1.60 | 6.0-20 | 0.02-0.07 | 4.5-8.4 | <2 | Low------- | 0.10 | | | |
| | 53-67 | 15-35 | 1.60-1.70 | 0.06-0.6 | 0.10-0.20 | 5.6-8.4 | <2 | Low------- | 0.24 | | | |
| | 67-80 | 25-40 | 1.60-1.70 | >0.06 | 0.10-0.31 | 5.6-8.4 | <2 | Low------- | 0.24 | | | |
| Mandarin-------- | 0-26 | 0-3 | 1.35-1.45 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low------- | 0.10 | 5 | 2 | 1-3 |
| | 26-44 | 2-9 | 1.45-1.60 | 0.6-2.0 | 0.10-0.15 | 3.6-6.0 | <2 | Low------- | 0.15 | | | |
| | 44-80 | 0-3 | 1.35-1.60 | 6.0-20 | 0.03-0.07 | 3.6-7.3 | <2 | Low------- | 0.10 | | | |
| 21---------- | 0-80 | 1-5 | 1.35-1.60 | >20 | 0.02-0.05 | 4.5-6.0 | <2 | Low------- | 0.10 | 5 | 1 | <1 |
| Kershaw | | | | | | | | | | | | |
| 22---------- | 0-28 | 3-10 | 1.45-1.65 | 2.0-20 | 0.05-0.13 | 4.5-5.5 | 0 | Low------- | 0.10 | 5 | 2 | 1-2 |
| Ocilla | 28-68 | 14-35 | 1.55-1.70 | 0.2-2.0 | 0.09-0.15 | 4.5-5.5 | 0 | Low------- | 0.24 | | | |
| | 68-80 | 12-40 | 1.55-1.85 | 0.2-2.0 | 0.09-0.12 | 4.5-5.5 | 0 | Low------- | 0.24 | | | |
| 23: | | | | | | | | | | | | |
| Melvina--------- | 0-6 | 0-3 | 1.35-1.47 | 6.0-20 | 0.05-0.15 | 3.6-6.5 | <2 | Low------- | 0.10 | 5 | 1 | 1-2 |
| | 6-28 | 0-3 | 1.35-1.60 | 6.0-20 | 0.02-0.05 | 3.6-6.5 | <2 | Low------- | 0.10 | | | |
| | 28-39 | 1-8 | 1.45-1.60 | 2.0-6.0 | 0.10-0.15 | 4.5-7.3 | <2 | Low------- | 0.15 | | | |
| | 39-53 | 0-3 | 1.35-1.60 | 6.0-20 | 0.02-0.07 | 4.5-8.4 | <2 | Low------- | 0.10 | | | |
| | 53-67 | 15-35 | 1.60-1.70 | 0.2-0.6 | 0.10-0.31 | 5.6-8.4 | <2 | Low------- | 0.24 | | | |
| | 67-80 | 15-37 | 1.60-1.70 | 0.06-0.2 | 0.10-0.31 | 5.6-8.4 | <2 | Low------- | 0.24 | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 23: | | | | | | | | | | | | |
| Moriah | 0-5 | 0-5 | 1.35-1.50 | 6.0-20 | 0.05-0.10 | 3.6-5.0 | <2 | Low | 0.10 | 4 | 1 | .5-2 |
| | 8-34 | 0-3 | 1.45-1.57 | 6.0-20 | 0.02-0.05 | 3.6-5.0 | <2 | Low | 0.10 | | | |
| | 34-57 | 15-35 | 1.50-1.70 | 0.06-2.0 | 0.10-0.26 | 5.6-8.4 | <2 | Low | 0.20 | | | |
| | 57 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Lutterloh | 0-51 | 0-5 | 1.45-1.57 | 6.0-20 | 0.02-0.05 | 4.5-6.0 | <2 | Low | 0.10 | --- | --- | 0-.5 |
| | 51-64 | 15-30 | 1.50-1.70 | 0.06-2.0 | 0.10-0.26 | 4.5-7.3 | <2 | Low | 0.24 | | | |
| | 64 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 24 | 0-50 | 1-10 | 1.40-1.60 | 6.0-20 | 0.02-0.12 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | <2 |
| Albany | 50-80 | 20-40 | 1.50-1.80 | 0.2-2.0 | 0.10-0.16 | 3.6-6.0 | <2 | Low | 0.24 | | | |
| 25 | 0-6 | 1-4 | 1.20-1.45 | 6.0-20 | 0.05-0.15 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | .5-3 |
| Pottsburg | 6-52 | 0-4 | 1.40-1.70 | 6.0-20 | 0.03-0.10 | 3.6-6.5 | <2 | Low | 0.10 | | | |
| | 52-80 | 1-6 | 1.55-1.70 | 0.6-2.0 | 0.10-0.25 | 3.6-6.0 | <2 | Low | 0.15 | | | |
| 26: | | | | | | | | | | | | |
| Resota | 0-80 | 0-3 | 1.30-1.60 | >6.0 | 0.02-0.06 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | <2 |
| Hurricane | 0-8 | 1-4 | 1.40-1.60 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 8-63 | 1-4 | 1.40-1.60 | 6.0-20 | 0.03-0.07 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 63-69 | 2-8 | 1.55-1.65 | 2.0-6.0 | 0.10-0.15 | 3.6-6.0 | <2 | Low | 0.15 | | | |
| | 69-80 | 1-4 | 1.40-1.60 | 2.0-20 | 0.03-0.10 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| 27 | 0-55 | 1-7 | 1.35-1.65 | 6.0-20 | 0.03-0.08 | 3.6-5.5 | <2 | Low | 0.10 | 5 | 1 | 1-3 |
| Plummer | 55-80 | 15-30 | 1.50-1.70 | 0.2-2.0 | 0.07-0.15 | 3.6-5.5 | <2 | Low | 0.15 | | | |
| 28: | | | | | | | | | | | | |
| Surrency | 0-16 | 2-8 | 0.80-1.25 | 6.0-20 | 0.15-0.30 | 3.6-5.5 | 0 | Low | 0.10 | 5 | 8 | 20-90 |
| | 16-38 | 0-10 | 1.50-1.65 | 2.0-20 | 0.05-0.10 | 3.6-5.5 | 0 | Low | 0.10 | | | |
| | 38-80 | 10-23 | 1.60-1.85 | 0.2-2.0 | 0.06-0.10 | 3.6-5.5 | 0 | Low | 0.15 | | | |
| Starke | 0-6 | 2-10 | 1.15-1.45 | 2.0-6.0 | 0.15-0.25 | 3.6-6.0 | <2 | Low | 0.05 | 5 | 2 | 9-20 |
| | 6-51 | 2-10 | 1.50-1.65 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 51-80 | 13-30 | 1.45-1.60 | 0.2-2.0 | 0.10-0.15 | 3.6-6.0 | <2 | Low | 0.20 | | | |
| Croatan | 0-25 | --- | 0.40-0.65 | 0.06-6.0 | 0.35-0.45 | <4.5 | <2 | Low | --- | 2 | 2 | 20-90 |
| | 25-39 | 8-20 | 1.40-1.60 | 0.2-6.0 | 0.10-0.15 | 3.5-6.5 | <2 | Low | 0.17 | | | |
| | 39-80 | 10-35 | 1.40-1.60 | 0.2-2.0 | 0.12-0.20 | 3.5-6.5 | <2 | Low | 0.24 | | | |
| 29: | | | | | | | | | | | | |
| Albany | 0-50 | 1-10 | 1.40-1.55 | 6.0-20 | 0.02-0.04 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | 1-2 |
| | 50-80 | 13-35 | 1.55-1.65 | 0.2-2.0 | 0.10-0.16 | 4.5-6.0 | <2 | Low | 0.24 | | | |
| Surrency | 0-16 | 2-8 | 0.80-1.25 | 6.0-20 | 0.15-0.30 | 3.6-5.5 | 0 | Low | 0.10 | 5 | 8 | 10-20 |
| | 16-35 | 0-10 | 1.50-1.65 | 2.0-20 | 0.05-0.10 | 3.6-5.5 | 0 | Low | 0.10 | | | |
| | 35-80 | 10-23 | 1.60-1.85 | 0.2-2.0 | 0.06-0.10 | 3.6-5.5 | 0 | Low | 0.15 | | | |
| 30: | | | | | | | | | | | | |
| Dorovan | 0-4 | --- | 0.20-0.40 | 0.6-2.0 | 0.20-0.25 | 3.6-4.4 | <2 | --- | --- | 3 | 2 | 20-90 |
| | 4-72 | --- | 0.20-0.55 | 0.6-6.0 | 0.20-0.25 | 3.6-4.4 | <2 | --- | --- | | | |
| | 72-80 | 0-20 | 1.40-1.65 | 6.0-20 | 0.05-0.08 | 3.6-5.5 | <2 | Low | --- | | | |
| Pamlico | 0-22 | --- | 0.20-0.65 | 0.6-2.0 | 0.24-0.40 | 3.6-5.5 | <2 | Low | --- | --- | 2 | 20-90 |
| | 22-65 | 0-10 | 1.60-1.75 | 6.0-20 | 0.02-0.10 | 3.6-5.5 | <2 | Low | 0.10 | | | |
| 33: | | | | | | | | | | | | |
| Wesconnett | 0-10 | 3-8 | 1.30-1.55 | 6.0-20 | 0.10-0.15 | 3.6-6.5 | <2 | Low | 0.15 | | | |
| | 10-40 | 2-7 | 1.35-1.50 | 6.0-20 | 0.05-0.08 | 3.6-6.5 | <2 | Low | 0.10 | | | |
| | 40-80 | 2-8 | 1.40-1.65 | 0.6-6.0 | 0.10-0.15 | 3.6-6.5 | <2 | Low | 0.15 | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 33: | | | | | | | | | | | | |
| Evergreen | 0-9 | --- | 0.20-0.40 | 6.0-20 | 0.25-0.40 | 3.6-5.5 | <2 | Low | .10 | 5 | 8 | 20-90 |
| | 9-21 | 1-8 | 1.40-1.70 | 6.0-20 | 0.10-0.20 | 3.6-5.5 | <2 | Low | .10 | | | |
| | 21-50 | 1-5 | 1.50-1.65 | 0.6-2.0 | 0.10-0.25 | 3.6-5.5 | <2 | Low | .10 | | | |
| | 50-80 | 1-8 | 1.40-1.70 | 6.0-20 | 0.10-0.20 | 3.6-5.5 | <2 | Low | .10 | | | |
| Pamlico | 0-22 | --- | 0.20-0.65 | 0.6-6.0 | 0.24-0.40 | 3.6-5.5 | <2 | Low | .10 | | 2 | 20-90 |
| | 22-65 | 5-10 | 1.60-1.75 | 6.0-20 | 0.02-0.10 | 3.6-5.5 | <2 | Low | .10 | | | |
| 34: | | | | | | | | | | | | |
| Clara | 0-6 | 0-4 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low | .10 | 5 | 1 | 1-8 |
| | 6-19 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low | .10 | | | |
| | 19-32 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 5.1-8.4 | <2 | Low | .10 | | | |
| | 32-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 5.1-8.4 | <2 | Low | .10 | | | |
| Bodiford | 0-12 | --- | 0.40-0.65 | 6.0-20 | 0.25-0.40 | 3.6-7.3 | <2 | Low | .10 | 4 | 8 | 20-90 |
| | 12-18 | 1-12 | 0.80-1.30 | 2.0-20 | 0.05-0.15 | 6.1-7.8 | <2 | Low | .10 | | | |
| | 18-29 | 3-12 | 1.20-1.50 | 6.0-20 | 0.05-0.10 | 6.6-7.8 | <2 | Low | .10 | | | |
| | 29-51 | 15-35 | 1.40-1.70 | 0.2-0.6 | 0.10-0.20 | 6.6-8.4 | <2 | Low | .24 | | | |
| | 51 | --- | --- | 2.0-20 | --- | --- | --- | --- | | | | |
| 35: | | | | | | | | | | | | |
| Tooles | 0-7 | 2-5 | 1.15-1.35 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | .10 | 4 | 1 | <4 |
| | 7-52 | 2-5 | 1.35-1.60 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | .10 | | | |
| | 52-65 | 20-35 | 1.40-1.70 | 0.06-0.2 | 0.15-0.20 | 6.6-8.4 | <2 | Moderate | .28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | --- | | | | |
| Meadowbrook | 0-9 | 0-3 | 1.35-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | .10 | 5 | 2 | 1-3 |
| | 9-58 | 0-6 | 1.35-1.75 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | .10 | | | |
| | 58-80 | 11-24 | 1.35-1.80 | 0.2-2.0 | 0.10-0.25 | 4.5-8.4 | <2 | Low | .15 | | | |
| Wekiva | 0-6 | 2-6 | 1.30-1.50 | 6.0-20 | 0.05-0.15 | 6.1-7.3 | <2 | Low | .10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.60 | 6.0-20 | 0.05-0.10 | 6.1-7.3 | <2 | Low | .10 | | | |
| | 14-21 | 12-35 | 1.45-1.65 | 0.2-0.6 | 0.10-0.15 | 6.1-7.3 | <2 | Low | .15 | | | |
| | 21 | --- | --- | 2.0-20 | --- | --- | --- | --- | | | | |
| 37: | | | | | | | | | | | | |
| Tooles | 0-7 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | .10 | 4 | 8 | <4 |
| | 7-52 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | .10 | | | |
| | 52-65 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.07-0.20 | 5.1-8.4 | <2 | Moderate | .28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | --- | | | | |
| Meadowbrook | 0-9 | 0-3 | 1.15-1.40 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | .10 | 5 | 8 | 2-4 |
| | 9-58 | 0-6 | 1.35-1.75 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | .10 | | | |
| | 58-80 | 9-32 | 1.35-1.65 | 0.2-2.0 | 0.10-0.25 | 4.5-8.4 | <2 | Low | .20 | | | |
| 38: | | | | | | | | | | | | |
| Clara | 0-6 | 0-4 | 1.15-1.30 | 6.0-20 | 0.15-0.20 | 3.6-7.3 | <2 | Low | .10 | 5 | 8 | 9-20 |
| | 6-19 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | .10 | | | |
| | 19-32 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 3.6-7.3 | <2 | Low | .10 | | | |
| | 32-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | .10 | | | |
| Meadowbrook | 0-9 | 0-3 | 1.15-1.40 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | .10 | 5 | 8 | 2-4 |
| | 9-58 | 0-6 | 1.35-1.75 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | .10 | | | |
| | 58-80 | 11-32 | 1.50-1.65 | 0.2-2.0 | 0.10-0.25 | 4.5-8.4 | <2 | Low | .20 | | | |
| 40 | 0-51 | 0-5 | 1.45-1.55 | 6.0-20 | 0.02-0.05 | 5.1-6.5 | <2 | Low | .10 | 5 | 1 | <3 |
| Lutterloh | 51-64 | 15-30 | 1.60-1.70 | 0.06-2.0 | 0.10-0.15 | 5.1-7.3 | <2 | Low | .24 | | | |
| | 64 | --- | --- | 2.0-20 | --- | --- | --- | --- | | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 41: | | | | | | | | | | | | |
| Tooles | 0-8 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | 0.10 | 4 | 8 | <4 |
| | 8-35 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| | 35-55 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.07-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 55 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Meadowbrook | 0-9 | 0-3 | 1.35-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 9-58 | 0-6 | 1.35-1.75 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | 0.10 | | | |
| | 58-80 | 9-24 | 1.50-1.80 | 0.2-2.0 | 0.10-0.25 | 4.5-8.4 | <2 | Low | 0.15 | | | |
| 45 | 0-8 | 1-3 | 1.10-1.65 | 6.0-20 | 0.05-0.15 | 3.6-6.0 | <2 | Low | 0.10 | 5 | 1 | 2-6 |
| Chaires | 8-18 | 0-3 | 1.40-1.70 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low | 0.10 | | | |
| | 18-35 | 2-13 | 1.45-1.60 | 0.6-2.0 | 0.15-0.25 | 3.6-6.0 | <2 | Low | 0.20 | | | |
| | 35-61 | 15-35 | 1.60-1.70 | 0.06-0.6 | 0.10-0.27 | 4.5-7.3 | <2 | Low | 0.24 | | | |
| | 61 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 46 | 0-60 | --- | --- | --- | --- | --- | <2 | --- | --- | --- | 8 | --- |
| Pits | | | | | | | | | | | | |
| 48: | | | | | | | | | | | | |
| Wekiva | 0-6 | 2-6 | 1.30-1.50 | 6.0-20 | 0.05-0.15 | 6.1-7.3 | <2 | Low | 0.10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.60 | 6.0-20 | 0.05-0.10 | 6.1-7.3 | <2 | Low | 0.10 | | | |
| | 14-21 | 12-35 | 1.45-1.65 | 0.2-0.6 | 0.10-0.15 | 6.1-7.3 | <2 | Low | 0.15 | | | |
| | 21 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Tennille | 0-6 | 2-9 | 0.46-1.50 | 6.0-20 | 0.05-0.33 | 6.1-7.3 | <2 | Low | 0.10 | 1 | 2 | .5-9 |
| | 6-14 | 1-9 | 1.45-1.60 | 6.0-20 | 0.05-0.10 | 6.1-7.3 | <2 | Low | 0.10 | | | |
| | 14 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Tooles | 0-8 | 2-5 | 1.15-1.35 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | 0.10 | 4 | 1 | <4 |
| | 8-35 | 2-5 | 1.35-1.60 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | 0.10 | | | |
| | 35-55 | 20-35 | 1.40-1.70 | 0.06-0.2 | 0.15-0.20 | 6.6-8.4 | <2 | Moderate | 0.28 | | | |
| | 55 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 49: | | | | | | | | | | | | |
| Seaboard | 0-3 | 0-3 | 1.20-1.40 | 6.0-20 | 0.05-0.14 | 5.1-6.0 | <2 | Low | 0.10 | 2 | 1 | .5-2 |
| | 3-8 | 0-3 | 1.50-1.60 | 6.0-20 | 0.03-0.08 | 5.6-7.3 | <2 | Low | 0.10 | | | |
| | 8 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Bushnell | 0-10 | 2-8 | 1.35-1.55 | 2.0-20 | 0.10-0.15 | 4.5-7.3 | <2 | Low | 0.10 | 2 | 1 | 1-4 |
| | 10-14 | 2-8 | 1.55-1.70 | 2.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | 0.10 | | | |
| | 14-30 | 35-60 | 1.40-1.60 | 0.06-0.2 | 0.10-0.15 | 4.5-8.4 | <2 | High | 0.28 | | | |
| | 30 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Matmon | 0-11 | 1-6 | 1.35-1.60 | 6.0-20 | 0.05-0.10 | 5.1-7.3 | <2 | Low | 0.15 | 2 | 1 | 2-5 |
| | 11-19 | 12-35 | 1.35-1.65 | 0.2-0.6 | 0.10-0.15 | 6.1-7.8 | <2 | Low | 0.10 | | | |
| | 19 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 51: | | | | | | | | | | | | |
| Tooles | 0-7 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | 0.10 | 4 | 1 | <4 |
| | 7-52 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| | 52-65 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.15-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Nutall | 0-17 | 1-5 | 1.20-1.40 | 6.0-20 | 0.05-0.10 | 4.5-7.3 | <2 | Low | 0.10 | 3 | 2 | 4-8 |
| | 17-30 | 20-35 | 1.40-1.70 | 0.06-0.2 | 0.15-0.20 | 6.6-8.4 | <2 | Moderate | 0.28 | | | |
| | 30 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 52: | | | | | | | | | | | | |
| Clara, depressional | 0-2 | 0-4 | 1.15-1.55 | 6.0-20 | 0.15-0.20 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 8 | 9-20 |
| | 2-37 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| | 37-50 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| | 50-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| Clara | 0-6 | 0-4 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low | 0.10 | 5 | 1 | 1-8 |
| | 6-19 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| | 19-32 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| | 32-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 5.1-8.4 | <2 | Low | 0.10 | | | |
| Meadowbrook | 0-9 | 0-3 | 1.35-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 9-58 | 0-6 | 1.35-1.75 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | 0.10 | | | |
| | 58-80 | 9-24 | 1.50-1.80 | 0.2-2.0 | 0.10-0.15 | 4.5-8.4 | <2 | Low | 0.15 | | | |
| 53 | 0-5 | --- | 0.20-0.40 | 6.0-20 | 0.24-0.30 | 5.1-8.4 | >4 | Low | ---- | 5 | 2 | 20-90 |
| Bayvi | 5-17 | 3-12 | 1.20-1.55 | 6.0-20 | 0.01-0.03 | 3.6-8.4 | >4 | Low | 0.10 | | | |
| | 17-80 | 3-9 | 1.50-1.60 | 6.0-20 | 0.01-0.03 | 3.6-8.4 | 4-16 | Low | 0.10 | | | |
| 54: | | | | | | | | | | | | |
| Tooles | 0-7 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | 0.10 | 4 | 1 | <4 |
| | 7-52 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.15 | 3.5-7.3 | <2 | Low | 0.10 | | | |
| | 52-65 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.15-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | --- | ---- | | | |
| Meadowbrook | 0-9 | 0-3 | 1.35-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 2 | 1-3 |
| | 9-58 | 0-6 | 1.35-1.65 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low | 0.10 | | | |
| | 58-80 | 9-24 | 1.50-1.80 | 0.2-2.0 | 0.10-0.15 | 4.5-8.4 | <2 | Low | 0.15 | | | |
| Clara | 0-6 | 0-4 | 1.15-1.30 | 6.0-20 | 0.15-0.20 | 3.6-7.3 | <2 | Low | 0.10 | 5 | 8 | 9-20 |
| | 6-19 | 1-3 | 1.40-1.55 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| | 19-22 | 1-6 | 1.40-1.65 | 6.0-20 | 0.10-0.15 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| | 22-80 | 1-12 | 1.50-1.70 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | 0.10 | | | |
| 55 | 0-10 | 1-10 | 1.35-1.55 | 6.0-20 | 0.02-0.08 | 6.6-8.4 | <2 | Low | 0.10 | 5 | 2 | <.5 |
| Arents | 10-32 | 1-10 | 1.35-1.55 | 6.0-20 | 0.02-0.08 | 5.6-8.4 | <2 | Low | 0.10 | | | |
| | 32-60 | 1-10 | 1.35-1.55 | 6.0-20 | 0.02-0.08 | 5.6-6.5 | <2 | Low | 0.10 | | | |
| 57 | 0-8 | 1-6 | 1.10-1.30 | 6.0-20 | 0.15-0.20 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | 10-20 |
| Sapelo | 8-18 | 2-5 | 1.40-1.65 | 6.0-20 | 0.03-0.07 | 3.6-5.5 | <2 | Low | 0.10 | 5 | 1 | 1-3 |
| | 18-32 | 3-7 | 1.35-1.60 | 0.6-2.0 | 0.10-0.15 | 3.6-5.5 | <2 | Low | 0.15 | | | |
| | 32-46 | 3-6 | 1.50-1.70 | 6.0-20 | 0.03-0.07 | 3.6-5.5 | <2 | Low | 0.17 | | | |
| | 46-80 | 10-30 | 1.55-1.75 | 0.2-2.0 | 0.12-0.17 | 3.6-5.5 | <2 | Low | 0.24 | | | |
| 58 | 0-6 | 1-6 | 1.10-1.30 | 6.0-20 | 0.15-0.20 | 3.6-6.5 | <2 | Low | 0.10 | 5 | 1 | 10-20 |
| Leon | 6-10 | <3 | 1.40-1.60 | 6.0-20 | 0.05-0.10 | 3.6-6.5 | <2 | Low | 0.10 | | | |
| | 10-42 | 2-8 | 1.25-1.65 | 0.6-6.0 | 0.15-0.30 | 3.6-6.5 | <2 | Low | 0.15 | | | |
| | 42-65 | 1-4 | 1.50-1.60 | 2.0-20 | 0.05-0.10 | 3.6-6.5 | <2 | Low | 0.10 | | | |
| | 65-80 | 2-8 | 1.25-1.65 | 0.6-6.0 | 0.15-0.30 | 3.6-6.5 | <2 | Low | 0.15 | | | |
| 59 | 0-24 | 2-8 | 1.45-1.65 | 6.0-20 | 0.02-0.08 | 4.5-7.8 | <2 | Low | 0.17 | 5 | 2 | <3 |
| Arents | 24-60 | --- | --- | 2.0-20.0 | --- | --- | --- | --- | ---- | | | |
| 60: | | | | | | | | | | | | |
| Chaires | 0-8 | 1-3 | 1.10-1.45 | 6.0-20 | 0.05-0.15 | 3.6-5.5 | <2 | Low | 0.10 | 5 | 1 | 2-6 |
| | 8-18 | 0-3 | 1.45-1.55 | 6.0-20 | 0.02-0.05 | 3.6-5.5 | <2 | Low | 0.10 | | | |
| | 18-35 | 2-13 | 1.45-1.60 | 0.6-2.0 | 0.15-0.20 | 3.6-5.5 | <2 | Low | 0.20 | | | |
| | 35-61 | 15-40 | 1.25-1.70 | 0.06-0.6 | 0.12-0.20 | 4.5-7.3 | <2 | Moderate | 0.32 | | | |
| | 61 | --- | --- | 2.0-20 | --- | --- | --- | --- | ---- | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors | | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | K | T | | Pct |
| 60: | | | | | | | | | | | | |
| Meadowbrook----- | 0-3 | 1-5 | 1.30-1.65 | 6.0-20 | 0.05-0.12 | 3.6-7.3 | <2 | Low------- | 0.10 | 5 | 1 | 1-4 |
| | 3-58 | 0-5 | 1.45-1.65 | 6.0-20 | 0.03-0.09 | 3.6-8.4 | <2 | Low------- | 0.10 | | | |
| | 58-75 | 18-35 | 1.35-1.80 | 0.2-2.0 | 0.10-0.25 | 5.6-8.4 | <2 | Moderate-- | 0.17 | | | |
| | 75 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| 61: | | | | | | | | | | | | |
| Wekiva---------- | 0-6 | 2-6 | 1.06-1.50 | 6.0-20 | 0.05-0.24 | 5.6-7.3 | <2 | Low------- | 0.10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.72 | 6.0-20 | 0.05-0.10 | 5.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 14-21 | 12-35 | 1.45-1.74 | 0.2-0.6 | 0.10-0.17 | 6.1-7.3 | <2 | Low------- | 0.15 | | | |
| | 21 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| Tooles---------- | 0-8 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low------- | 0.10 | 4 | 1 | 1-4 |
| | 8-35 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 35-55 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.17-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 55 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| Tennille-------- | 0-6 | 2-9 | 0.46-1.50 | 6.0-20 | 0.05-0.33 | 6.1-7.3 | <2 | Low------- | 0.10 | 1 | 2 | .5-9 |
| | 6-14 | 1-9 | 1.45-1.60 | 6.0-20 | 0.05-0.10 | 6.1-7.3 | <2 | Low------- | 0.10 | | | |
| | 14 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| 62: | | | | | | | | | | | | |
| Tooles---------- | 0-8 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low------- | 0.10 | 4 | 8 | <4 |
| | 8-35 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 35-55 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.15-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 55 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| Tennille-------- | 0-6 | 2-9 | 0.40-1.30 | 6.0-20 | 0.15-0.33 | 6.1-7.3 | <2 | Low------- | 0.10 | 1 | 2 | 10-20 |
| | 6-14 | 1-9 | 1.45-1.60 | 6.0-20 | 0.05-0.10 | 6.1-7.3 | <2 | Low------- | 0.10 | | | |
| | 14 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| Wekiva---------- | 0-6 | 2-6 | 1.06-1.50 | 6.0-20 | 0.05-0.24 | 5.6-7.3 | <2 | Low------- | 0.10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.72 | 6.0-20 | 0.05-0.10 | 5.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 14-21 | 12-35 | 1.45-1.71 | 0.2-0.6 | 0.10-0.17 | 6.1-7.3 | <2 | Low------- | 0.15 | | | |
| | 21 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| 63---------- | 0-5 | 0-3 | 1.35-1.45 | 6.0-20 | 0.05-0.15 | 4.5-6.0 | <2 | Low------- | 0.10 | 3 | 1 | 2-5 |
| Steinhatchee | 5-18 | 0-3 | 1.35-1.45 | 6.0-20 | 0.02-0.05 | 4.5-6.0 | <2 | Low------- | 0.10 | | | |
| | 18-29 | 1-8 | 1.45-1.60 | 2.0-6.0 | 0.10-0.20 | 4.5-6.0 | <2 | Low------- | 0.15 | | | |
| | 29-35 | 15-35 | 1.60-1.70 | 0.2-0.6 | 0.10-0.20 | 5.6-7.3 | <2 | Low------- | 0.24 | | | |
| | 35 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| 64: | | | | | | | | | | | | |
| Tooles---------- | 0-7 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low------- | 0.10 | 4 | 1 | <4 |
| | 7-52 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 52-65 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.15-0.20 | 5.1-8.4 | <2 | Moderate | 0.28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| Wekiva---------- | 0-6 | 2-6 | 1.06-1.50 | 6.0-20 | 0.05-0.24 | 5.6-7.3 | <2 | Low------- | 0.10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.72 | 6.0-20 | 0.05-0.10 | 5.6-7.3 | <2 | Low------- | 0.10 | | | |
| | 14-21 | 12-35 | 1.45-1.74 | 0.2-0.6 | 0.10-0.17 | 6.1-7.3 | <2 | Low------- | 0.15 | | | |
| | 21 | --- | --- | 2.0-20 | --- | --- | --- | ---------- | ---- | | | |
| 65: | | | | | | | | | | | | |
| Yellowjacket---- | 0-42 | --- | 0.15-0.70 | 6.0-20 | 0.35-0.45 | 5.6-8.4 | <2 | Low------- | ---- | 2 | 8 | 25-65 |
| | 42-60 | 1-12 | 1.15-1.30 | 6.0-20 | 0.20-0.25 | 6.6-8.4 | <2 | Low------- | 0.10 | | | |
| | 60-80 | 1-12 | 1.40-1.55 | 6.0-20 | 0.05-0.15 | 6.6-8.4 | <2 | Low------- | 0.10 | | | |
| Maurepas-------- | 0-65 | --- | 0.05-0.25 | 6.0-20 | 0.20-0.50 | 5.6-8.4 | <4 | Low------- | ---- | 3 | --- | --- |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 67: | | | | | | | | | | | | |
| Yellowjacket | 0-42 | --- | 0.15-0.70 | 6.0-20 | 0.35-0.45 | 5.6-8.4 | <2 | Low | .17 | 2 | 8 | 25-65 |
| | 42-60 | 1-12 | 1.15-1.30 | 6.0-20 | 0.20-0.25 | 6.6-8.4 | <2 | Low | .10 | | | |
| | 60-80 | 1-12 | 1.40-1.55 | 6.0-20 | 0.05-0.15 | 6.6-8.4 | <2 | Low | .10 | | | |
| Maurepas | 0-65 | --- | 0.05-0.25 | 6.0-20 | 0.20-0.50 | 5.6-8.4 | <4 | Low | .17 | 3 | --- | --- |
| 68: | | | | | | | | | | | | |
| Matmon | 0-11 | 1-6 | 1.35-1.60 | 6.0-20 | 0.05-0.10 | 5.1-7.3 | <2 | Low | .15 | 2 | 1 | 2-5 |
| | 11-19 | 12-35 | 1.35-1.65 | 0.2-0.6 | 0.10-0.15 | 6.1-7.8 | <2 | Low | .10 | | | |
| | 19 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Wekiva | 0-6 | 2-6 | 1.06-1.50 | 6.0-20 | 0.05-0.24 | 5.6-7.3 | <2 | Low | .10 | 2 | 2 | 2-5 |
| | 6-14 | 1-6 | 1.45-1.72 | 6.0-20 | 0.05-0.10 | 5.6-7.3 | <2 | Low | .10 | | | |
| | 14-21 | 12-35 | 1.45-1.74 | 0.2-0.6 | 0.10-0.17 | 6.1-7.3 | <2 | Low | .15 | | | |
| Rock outcrop | 0 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | --- | 8 | --- |
| 69: | | | | | | | | | | | | |
| Eunola | 0-6 | 3-11 | 1.45-1.70 | 2.0-6.0 | 0.06-0.11 | 4.5-5.5 | <2 | Low | .15 | 5 | 2 | .5-2 |
| | 6-15 | 18-35 | 1.35-1.65 | 0.6-2.0 | 0.12-0.17 | 4.5-5.5 | <2 | Low | .28 | | | |
| | 15-40 | 18-45 | 1.30-1.60 | 0.6-2.0 | 0.12-0.16 | 4.5-5.5 | <2 | Low | .32 | | | |
| | 40-50 | 8-25 | 1.35-1.65 | 2.0-6.0 | 0.10-0.16 | 4.5-5.5 | <2 | Low | .24 | | | |
| | 50-80 | 2-11 | 1.45-1.75 | 6.0-20 | 0.02-0.06 | 4.5-5.5 | <2 | Low | .20 | | | |
| Goldhead | 0-6 | 1-5 | 1.30-1.50 | 6.0-20 | 0.05-0.15 | 4.5-7.8 | <2 | Low | .10 | 5 | 2 | 1-4 |
| | 6-35 | 1-5 | 1.35-1.50 | 6.0-20 | 0.02-0.05 | 4.5-7.8 | <2 | Low | .10 | | | |
| | 35-80 | 13-34 | 1.45-1.65 | 0.2-2.0 | 0.10-0.20 | 4.5-8.4 | <2 | Low | .24 | | | |
| Tooles | 0-7 | 0-5 | 1.15-1.47 | 6.0-20 | 0.05-0.10 | 3.6-7.3 | <2 | Low | .10 | 4 | 1 | 1-4 |
| | 7-52 | 0-5 | 1.35-1.65 | 6.0-20 | 0.05-0.15 | 3.6-7.3 | <2 | Low | .10 | | | |
| | 52-65 | 20-35 | 1.40-1.71 | 0.06-0.2 | 0.15-0.20 | 5.1-8.4 | <2 | Moderate | .28 | | | |
| | 65 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 70: | | | | | | | | | | | | |
| Chiefland | 0-5 | 1-5 | 1.35-1.50 | 6.0-20 | 0.02-0.10 | 5.1-7.3 | <2 | Low | .10 | 4 | 2 | .5-4 |
| | 5-26 | 1-3 | 1.45-1.60 | 6.0-20 | 0.02-0.10 | 5.6-7.3 | <2 | Low | .10 | | | |
| | 26-35 | 15-35 | 1.50-1.70 | 0.6-2.0 | 0.07-0.15 | 5.6-8.4 | <2 | Low | .20 | | | |
| | 35 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| Chiefland, frequently flooded | 0-5 | 1-5 | 1.35-1.50 | 6.0-20 | 0.02-0.10 | 5.1-7.3 | <2 | Low | .10 | 4 | 2 | .5-4 |
| | 5-26 | 1-3 | 1.45-1.60 | 6.0-20 | 0.02-0.10 | 5.6-7.3 | <2 | Low | .10 | | | |
| | 26-35 | 15-35 | 1.50-1.70 | 0.6-2.0 | 0.07-0.15 | 5.6-8.4 | <2 | Low | .20 | | | |
| | 35 | --- | --- | 2.0-20 | --- | --- | --- | --- | --- | | | |
| 71 | 0-6 | 0-5 | 1.15-1.65 | 6.0-20 | 0.05-0.15 | 3.6-5.5 | <2 | Low | .10 | 5 | 1 | .5-4 |
| Leon | 6-25 | <3 | 1.30-1.65 | 6.0-20 | 0.05-0.10 | 3.6-5.5 | <2 | Low | .10 | | | |
| | 25-34 | 2-8 | 1.35-1.70 | 0.6-6.0 | 0.15-0.30 | 3.6-5.5 | <2 | Low | .15 | | | |
| | 34-80 | 1-4 | 1.50-1.76 | 0.2-20 | 0.05-0.10 | 3.6-5.5 | <2 | Low | .10 | | | |
| 72 | 0-6 | 1-3 | 1.10-1.45 | 6.0-20 | 0.05-0.15 | 3.6-5.5 | <2 | Low | .10 | 5 | 1 | 2-6 |
| Chaires | 6-20 | 0-3 | 1.45-1.55 | 6.0-20 | 0.05-0.10 | 3.6-5.5 | <2 | Low | .10 | | | |
| | 20-52 | 2-13 | 1.45-1.60 | 0.6-2.0 | 0.15-0.20 | 3.6-5.5 | <2 | Low | .20 | | | |
| | 52-80 | 15-35 | 1.60-1.70 | 0.06-0.6 | 0.10-0.20 | 4.5-7.3 | <2 | Low | .24 | | | |
| 73 | 0-9 | 1-5 | 1.35-1.50 | 6.0-20 | 0.05-0.10 | 3.6-6.0 | <2 | Low | .10 | 5 | 1 | 1-5 |
| Chipley | 9-80 | 1-7 | 1.45-1.75 | 6.0-20 | 0.03-0.08 | 4.5-6.5 | <2 | Low | .10 | | | |

Table 15.--Physical and Chemical Properties of the Soils--Continued

| Soil name and map symbol | Depth | Clay | Moist bulk density | Permeability | Available water capacity | Soil reaction | Salinity | Shrink-swell potential | Erosion factors K | Erosion factors T | Wind erodibility group | Organic matter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Pct | g/cc | In/hr | In/in | pH | mmhos/cm | | | | | Pct |
| 74---------- Mascotte | 0-4 | 0-5 | 1.20-1.50 | 6.0-20 | 0.05-0.15 | 3.6-5.5 | <2 | Low------- | 0.10 | 5 | 1 | 2-7 |
| | 4-10 | 0-5 | 1.35-1.55 | 6.0-20 | 0.03-0.08 | 3.6-5.5 | <2 | Low------- | 0.10 | | | |
| | 10-17 | 3-10 | 1.35-1.50 | 0.6-2.0 | 0.10-0.15 | 3.6-5.5 | <2 | Low------- | 0.15 | | | |
| | 17-30 | 0-5 | 1.35-1.55 | 6.0-20 | 0.03-0.08 | 3.6-5.5 | <2 | Low------- | 0.10 | | | |
| | 30-35 | 1-8 | 1.45-1.70 | 6.0-20 | 0.03-0.08 | 3.6-5.5 | <2 | Low------- | 0.15 | | | |
| | 35-80 | 14-35 | 1.55-1.79 | 0.2-0.6 | 0.10-0.15 | 3.6-5.5 | <2 | Low------- | 0.24 | | | |

Table 16.--Soil and Water Features

("Flooding" and "water table" and terms such as "rare," "brief," and "apparent" are explained in the text. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

| Soil name and map symbol | Hydrologic group | Flooding | | | High water table | | | Bedrock | | Subsidence | | Risk of corrosion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Frequency | Duration | Months | Depth | Kind | Months | Depth | Hardness* | Initial | Total | Uncoated steel | Concrete |
| | | | | | Ft | | | In | | In | In | | |
| 3: | | | | | | | | | | | | | |
| Osier | A/D | None | --- | --- | 0.5-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| Clara | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 5--Chaires | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 6--Leon | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 8--Meadowbrook | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 9--Sapelo | D | None | --- | --- | 0-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 10: | | | | | | | | | | | | | |
| Mandarin | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| Hurricane | C | None | --- | --- | 2.0-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | Moderate. |
| 12--Ortega | A | None | --- | --- | 3.5-6.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| 13--Hurricane | C | None | --- | --- | 2.0-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | Moderate. |
| 14: | | | | | | | | | | | | | |
| Chipley | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| Lynn Haven | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| Boulogne | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 15--Ridgewood | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| 16: | | | | | | | | | | | | | |
| Lutterloh | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Ridgewood | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| 17: | | | | | | | | | | | | | |
| Ousley | C | Occasional | Very brief | Jan-Sep | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| Leon | B/D | Occasional | Brief | Jan-Sep | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | | --- | High | High. |
| Clara | B/D | Occasional | Brief | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |

See footnote at end of table.

Table 16.--Soil and Water Features--Continued

| Soil name and map symbol | Hydrologic group | Flooding | | | High water table | | | Bedrock | | Subsidence | | Risk of corrosion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Frequency | Duration | Months | Depth | Kind | Months | Depth | Hardness* | Initial | Total | Uncoated steel | Concrete |
| | | | | | Ft | | | In | | In | In | | |
| 19: | | | | | | | | | | | | | |
| Otela | A | None | --- | --- | 4.0-6.0 | Perched | Dec-Sep | >60 | --- | --- | --- | Low | Low. |
| Ortega | A | None | --- | --- | 3.5-6.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| Lutterloh | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| 20: | | | | | | | | | | | | | |
| Melvina | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | 60-80 | Soft | --- | --- | Moderate | Moderate. |
| Mandarin | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 21--Kershaw | A | None | --- | --- | >6.0 | --- | --- | >60 | --- | --- | --- | Low | High. |
| 22--Ocilla | C | None | --- | --- | 1.0-2.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| 23: | | | | | | | | | | | | | |
| Melvina | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | 60-80 | Soft | --- | --- | Moderate | Moderate. |
| Moriah | B | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | 40-72 | Soft | --- | --- | High | High. |
| Lutterloh | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| 24--Albany | C | None | --- | --- | 1.0-2.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 25--Pottsburg | B/D | None | --- | --- | 0.5-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 26: | | | | | | | | | | | | | |
| Resota | A | None | --- | --- | 3.5-5.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| Hurricane | C | None | --- | --- | 2.0-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | Moderate. |
| 27--Plummer | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 28: | | | | | | | | | | | | | |
| Surrency | D | None | --- | --- | +1-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| Starke | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| Croatan | D | Rare | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | 4-10 | 18-24 | High | High. |
| 29: | | | | | | | | | | | | | |
| Albany | C | None | --- | --- | 1.0-2.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| Surrency | D | None | --- | --- | +1-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 30: | | | | | | | | | | | | | |
| Dorovan | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | 6-12 | 51-80 | High | High. |
| Pamlico | D | Rare | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | 4-20 | 10-36 | High | High. |
| 33: | | | | | | | | | | | | | |
| Wesconnett | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| Evergreen | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | 2-6 | 8-11 | High | High. |

See footnote at end of table.

Table 16.--Soil and Water Features--Continued

| Soil name and map symbol | Hydrologic group | Flooding | | | High water table | | | Bedrock | | Subsidence | | Risk of corrosion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Frequency | Duration | Months | Depth | Kind | Months | Depth | Hardness* | Initial | Total | Uncoated steel | Concrete |
| | | | | | Ft | | | In | | In | In | | |
| 33: | | | | | | | | | | | | | |
| Pamlico | D | Rare | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | 4-20 | 10-36 | High | High. |
| 34: | | | | | | | | | | | | | |
| Clara | B/D | Frequent | Long | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Bodiford | D | Frequent | Long | Jan-Sep | 0-0.5 | Apparent | Dec-Sep | 40-60 | Soft | 2-6 | 8-15 | High | Low. |
| 35: | | | | | | | | | | | | | |
| Tooles | D | Frequent | Long | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Meadowbrook | B/D | Frequent | Long | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| Wekiva | D | Frequent | Long | Jan-Sep | +1-0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| 37: | | | | | | | | | | | | | |
| Tooles | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Meadowbrook | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 38: | | | | | | | | | | | | | |
| Clara | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Meadowbrook | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 40--Lutterloh | C | None | --- | --- | 1.5-2.5 | Apparent | Dec-Sep | 60-80 | Soft | --- | --- | High | Moderate. |
| 41: | | | | | | | | | | | | | |
| Tooles | B/D | None | --- | --- | +1-0.5 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Meadowbrook | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 45--Chaires | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | 50-80 | Soft | --- | --- | High | High. |
| 46. Pits | | | | | | | | | | | | | |
| 48: | | | | | | | | | | | | | |
| Wekiva | D | Occasional | Brief | Jan-Sep | +1-0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| Tennille | D | Occasional | Brief | Jan-Sep | +1-0.5 | Apparent | Dec-Sep | 6-20 | Soft | --- | --- | High | Low. |
| Tooles | D | Occasional | Brief | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| 49: | | | | | | | | | | | | | |
| Seaboard | B | None | --- | --- | 4.0-5.0 | Apparent | Dec-Sep | 6-20 | Soft | --- | --- | High | High. |
| Bushnell | C | None | --- | --- | 1.5-3.0 | Apparent | Dec-Sep | 20-40 | Soft | --- | --- | High | Moderate |
| Matmon | D | None | --- | --- | 1.0-2.0 | Apparent | Dec-Sep | 10-20 | Soft | --- | --- | High | Low. |
| 51: | | | | | | | | | | | | | |
| Tooles | D | Frequent | Long | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Nutall | D | Frequent | Long | Jan-Sep | 0-0.5 | Apparent | Dec-Sep | 20-40 | Soft | --- | --- | High | Moderate. |

See footnote at end of table.

Table 16.--Soil and Water Features--Continued

| Soil name and map symbol | Hydrologic group | Flooding | | | High water table | | | Bedrock | | Subsidence | | Risk of corrosion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Frequency | Duration | Months | Depth | Kind | Months | Depth | Hardness* | Initial | Total | Uncoated steel | Concrete |
| | | | | | Ft | | | In | | In | In | | |
| 52: | | | | | | | | | | | | | |
| Clara, depressional | D | Occasional | Brief | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Clara | B/D | Occasional | Brief | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Meadowbrook | B/D | Occasional | Brief | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 53--Bayvi | D | Frequent | Very long | Jan-Dec | 0-0.5 | Apparent | Jan-Dec | >60 | --- | --- | --- | High | High. |
| 54: | | | | | | | | | | | | | |
| Tooles | B/D | None | --- | --- | +2-0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Meadowbrook | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | Moderate. |
| Clara | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| 55--Arents | C | None | --- | --- | 1.0-3.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 57--Sapelo | D | None | --- | --- | 0-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 58--Leon | B/D | None | --- | --- | 0-0.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 59--Arents | C | None | --- | --- | 1.5-3.5 | Apparent | Jan-Sep | >60 | --- | 5-10 | 12-36 | High | High. |
| 60: | | | | | | | | | | | | | |
| Chaires | B/D | Rare | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| Meadowbrook | B/D | Rare | --- | --- | 0-1.0 | Apparent | Dec-Sep | >60 | --- | --- | --- | Moderate | High. |
| 61: | | | | | | | | | | | | | |
| Wekiva | D | Rare | --- | --- | 0-1.0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| Tooles | B/D | Rare | --- | --- | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Tennille | D | Rare | --- | --- | 0.5-1.0 | Apparent | Dec-Sep | 6-20 | Soft | --- | --- | High | Low. |
| 62: | | | | | | | | | | | | | |
| Tooles | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Tennille | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | 6-20 | Soft | --- | --- | High | Low. |
| Wekiva | D | None | --- | --- | +2-0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| 63--Steinhatchee | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | 24-40 | Soft | --- | --- | Moderate | Moderate. |
| 64: | | | | | | | | | | | | | |
| Tooles | B/D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| Wekiva | D | None | --- | --- | 0-1.0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| 65: | | | | | | | | | | | | | |
| Yellowjacket | D | Frequent | Long | Jan-Dec | 0-0.5 | Apparent | Jan-Dec | 40-80 | --- | 4-10 | 16-24 | High | Low. |
| Maurepas | D | Frequent | Long | Jan-Dec | 0-0.5 | Apparent | Jan-Dec | >60 | --- | 15-30 | >51 | High | High. |

See footnote at end of table.

Table 16.--Soil and Water Features--Continued

| Soil name and map symbol | Hydrologic group | Flooding | | | High water table | | | Bedrock | | Subsidence | | Risk of corrosion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Frequency | Duration | Months | Depth | Kind | Months | Depth | Hardness* | Initial | Total | Uncoated steel | Concrete |
| | | | | | Ft | | | In | | In | In | | |
| 67: | | | | | | | | | | | | | |
| Yellowjacket | D | None | --- | --- | +2-0 | Apparent | Jan-Dec | 40-80 | Soft | 4-10 | 16-24 | High | Low. |
| Maurepas | D | None | --- | --- | +1-0 | Apparent | Jan-Dec | >60 | --- | 15-30 | >51 | High | High. |
| 68: | | | | | | | | | | | | | |
| Matmon | D | Occasional | Brief | Jan-Sep | 1.0-2.0 | Apparent | Dec-Sep | 10-20 | Soft | --- | --- | High | Low. |
| Wekiva | D | Occasional | Brief | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | 10-30 | Soft | --- | --- | High | Low. |
| Rock outcrop | D | Occasional | Brief | Jan-Sep | 0.5-1.0 | --- | --- | 0 | Soft | --- | --- | --- | --- |
| 69: | | | | | | | | | | | | | |
| Eunola | C | Occasional | Very brief | Jan-Sep | 1.5-2.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| Goldhead | B/D | Frequent | Long | Jan-Sep | 0-0.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | Moderate. |
| Tooles | D | Frequent | Long | Jan-Sep | 0-1.0 | Apparent | Dec-Sep | 40-60 | Soft | --- | --- | High | Moderate. |
| 70: | | | | | | | | | | | | | |
| Chiefland | B | None | --- | --- | 4-6 | --- | --- | 24-60 | Soft | --- | --- | Low | Low. |
| Chiefland, frequently flooded | B | Frequent | Brief | Jan-Sep | 4-6 | --- | --- | 24-60 | Soft | --- | --- | Low | Low. |
| 71--Leon | D | Rare | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |
| 72--Chaires | B/D | Rare | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | Soft | --- | --- | High | High. |
| 73--Chipley | C | None | --- | --- | 1.5-3.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | Low | High. |
| 74--Mascotte | B/D | None | --- | --- | 0.5-1.5 | Apparent | Dec-Sep | >60 | --- | --- | --- | High | High. |

* Soft limestone in Taylor County is usually 6 inches to 2 feet thick over hard limestone.

Table 17.--Physical Analyses of Selected Soils

(Absence of an entry indicates that data were not available.)

| Soil name and sample number | Depth | Hori-zon | Particle-size distribution: Sand: Very coarse (2-1 mm) | Sand: Coarse (1-0.5 mm) | Sand: Medium (0.5-0.25 mm) | Sand: Fine (0.25-0.1 mm) | Sand: Very fine (0.1-0.05 mm) | Sand: Total (2-0.05 mm) | Silt (0.05-0.002 mm) | Clay (<0.002 mm) | Hydraulic conductivity | Bulk density (field moist) | Water content: 1/10-bar | Water content: 1/3-bar | Water content: 15-bar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Pct | Pct | Pct | Pct | Pct | Pct | Pct | Pct | cm/hr | g/cc | ----Pct (wt)----- | | |
| Albany sand:[4] | | | | | | | | | | | | | | | |
| S84FL-040-012-1 | 0-25 | Ap | 0.5 | 7.4 | 28.7 | 45.5 | 9.2 | 91.3 | 6.3 | 2.4 | 19.5 | 1.54 | 9.3 | 5.9 | 1.6 |
| -2 | 25-66 | E1 | 0.3 | 6.7 | 26.0 | 46.7 | 10.4 | 90.1 | 7.0 | 2.9 | 57.2 | 1.48 | 8.0 | 5.6 | 1.5 |
| -3 | 66-94 | E2 | 0.5 | 6.5 | 25.6 | 47.5 | 10.3 | 90.4 | 6.3 | 3.3 | 32.9 | 1.60 | 5.7 | 3.9 | 1.3 |
| -4 | 94-127 | Eg | 0.4 | 7.1 | 26.2 | 48.2 | 9.6 | 91.5 | 5.5 | 3.0 | 25.6 | 1.61 | 6.0 | 4.0 | 1.4 |
| -5 | 127-145 | Bt | 1.7 | 11.6 | 24.4 | 34.6 | 6.5 | 78.8 | 5.3 | 15.9 | 1.6 | 1.80 | 10.2 | 8.8 | 5.1 |
| -6 | 145-175 | Btg1 | 0.4 | 4.0 | 14.0 | 30.8 | 8.6 | 57.8 | 4.8 | 37.4 | 0.2 | 1.72 | 20.3 | 19.7 | 13.4 |
| -7 | 175-203 | Btg2 | 0.0 | 1.5 | 12.1 | 39.0 | 11.9 | 64.5 | 4.6 | 30.9 | 0.2 | 1.77 | 18.6 | 16.6 | 10.7 |
| Chaires fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-005-1 | 0-15 | Ap | 1.2 | 7.9 | 25.5 | 55.0 | 7.6 | 97.2 | 1.5 | 1.3 | 37.3 | 1.31 | 10.8 | 7.5 | 2.6 |
| -2 | 15-51 | E | 0.9 | 7.2 | 23.3 | 59.1 | 6.9 | 97.4 | 1.6 | 1.0 | 29.8 | 1.53 | 4.9 | 3.1 | 0.5 |
| -3 | 51-66 | Bh1 | 0.7 | 6.9 | 21.4 | 55.7 | 6.7 | 91.4 | 4.5 | 4.1 | 25.2 | 1.41 | 16.8 | 10.4 | 2.9 |
| -4 | 66-76 | Bh2 | 0.7 | 6.4 | 21.1 | 56.1 | 8.0 | 92.3 | 4.1 | 3.6 | 8.2 | 1.62 | 10.2 | 6.9 | 2.0 |
| -5 | 76-132 | E' | 1.1 | 7.4 | 22.1 | 57.0 | 6.9 | 94.5 | 3.1 | 2.4 | 13.6 | 1.70 | 5.3 | 2.9 | 1.3 |
| -6 | 132-203 | Btg | 0.4 | 4.8 | 17.6 | 33.0 | 5.8 | 61.6 | 5.1 | 33.3 | 1.3 | 1.26 | 38.1 | 34.5 | 17.8 |
| Chaires fine sand, limestone substratum:[6] | | | | | | | | | | | | | | | |
| S88FL-123-008-1 | 0-15 | Ap | 1.1 | 10.3 | 23.5 | 52.9 | 9.1 | 96.9 | 2.0 | 1.1 | 23.7 | 1.61 | 6.4 | 4.1 | 1.1 |
| -2 | 15-64 | E | 1.6 | 10.8 | 21.8 | 54.0 | 8.7 | 96.9 | 2.0 | 1.1 | 18.8 | 1.66 | 4.5 | 2.6 | 0.5 |
| -3 | 64-74 | Bh1 | 1.2 | 10.2 | 20.9 | 52.9 | 9.0 | 94.2 | 4.4 | 1.4 | 18.2 | 1.60 | 16.0 | 9.5 | 1.8 |
| -4 | 74-104 | Bh2 | 2.3 | 11.4 | 20.4 | 51.7 | 8.4 | 94.2 | 3.0 | 2.8 | 19.7 | 1.65 | 9.4 | 6.2 | 1.0 |
| -5 | 104-112 | E' | 1.4 | 9.8 | 20.1 | 54.1 | 9.4 | 94.8 | 3.4 | 1.8 | 18.0 | 1.71 | 6.9 | 4.2 | 0.6 |
| -6 | 112-140 | Btg | 0.7 | 5.6 | 15.4 | 34.8 | 15.6 | 72.1 | 4.7 | 23.2 | 1.4 | 1.68 | 16.8 | 14.3 | 6.8 |
| Chiefland sand:[1] | | | | | | | | | | | | | | | |
| S90FL-029-017-1 | 0-13 | A | 0.2 | 5.6 | 33.6 | 41.8 | 12.5 | 93.7 | 3.8 | 2.5 | 44.1 | 1.41 | 7.6 | 5.1 | 1.5 |
| -2 | 13-43 | E1 | 0.2 | 5.5 | 31.1 | 43.0 | 14.9 | 94.7 | 3.6 | 1.7 | 31.6 | 1.57 | 4.9 | 2.5 | 0.6 |
| -3 | 43-66 | E2 | 0.4 | 6.1 | 33.1 | 42.2 | 12.9 | 94.7 | 4.2 | 1.1 | 26.3 | 1.57 | 4.1 | 2.0 | 0.5 |
| -4 | 66-89 | Bt | 0.5 | 4.4 | 24.6 | 31.2 | 10.4 | 71.1 | 4.2 | 24.7 | 6.1 | 1.52 | 16.1 | 13.4 | 6.7 |
| Chipley sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-009-1 | 0-23 | Ap | 0.6 | 10.2 | 29.0 | 49.5 | 7.2 | 96.5 | 1.6 | 1.9 | 47.3 | 1.46 | 7.4 | 5.2 | 1.1 |
| -2 | 23-51 | C1 | 0.9 | 10.8 | 28.5 | 48.1 | 6.8 | 95.1 | 2.8 | 2.1 | 23.7 | 1.65 | 5.4 | 3.6 | 0.9 |
| -3 | 51-122 | C2 | 1.6 | 11.7 | 27.8 | 47.5 | 7.0 | 95.6 | 1.9 | 2.5 | 43.4 | 1.64 | 4.1 | 2.7 | 0.7 |
| -4 | 122-175 | C3 | 1.0 | 10.3 | 27.5 | 52.1 | 6.7 | 97.6 | 1.2 | 1.2 | 37.8 | 1.62 | 3.2 | 1.9 | 0.3 |
| -5 | 175-203 | C4 | 1.0 | 10.9 | 28.6 | 48.5 | 6.5 | 95.5 | 2.8 | 1.7 | 13.6 | 1.73 | 5.0 | 3.4 | 0.6 |
| Hurricane fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-012-1 | 0-20 | Ap | 0.0 | 1.3 | 9.1 | 80.3 | 6.4 | 97.2 | 1.0 | 1.8 | 45.4 | 1.34 | 8.0 | 5.2 | 1.1 |
| -2 | 20-56 | E1 | 0.0 | 1.2 | 8.5 | 79.8 | 6.0 | 95.5 | 2.7 | 1.8 | 38.8 | 1.51 | 5.6 | 3.4 | 0.7 |
| -3 | 56-81 | E2 | 0.1 | 1.4 | 8.9 | 80.0 | 6.1 | 96.5 | 1.8 | 1.7 | 52.0 | 1.53 | 4.4 | 2.6 | 0.6 |
| -4 | 81-122 | E3 | 0.0 | 1.2 | 7.8 | 81.9 | 6.3 | 97.2 | 1.8 | 1.0 | 50.0 | 1.51 | 3.8 | 2.2 | 0.5 |
| -5 | 122-160 | E4 | 0.0 | 1.4 | 7.6 | 83.9 | 5.9 | 98.8 | 0.8 | 0.4 | 42.1 | 1.59 | 2.8 | 1.9 | 0.5 |
| -6 | 160-175 | BE | 0.0 | 1.2 | 7.4 | 83.4 | 5.1 | 97.1 | 1.5 | 1.4 | 29.6 | 1.57 | 4.9 | 2.7 | 0.6 |
| -7 | 175-203 | Bh | 0.0 | 1.1 | 6.8 | 83.3 | 6.3 | 97.5 | 0.7 | 1.8 | 30.3 | 1.64 | 4.6 | 2.3 | 0.5 |

See footnotes at end of table.

Table 17.--Physical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Particle-size distribution: Sand: Very coarse (2-1 mm) | Sand: Coarse (1-0.5 mm) | Sand: Medium (0.5-0.25 mm) | Sand: Fine (0.25-0.1 mm) | Sand: Very fine (0.1-0.05 mm) | Sand: Total (2-0.05 mm) | Silt (0.05-0.002 mm) | Clay (<0.002 mm) | Hydraulic conductivity | Bulk density (field moist) | Water content: 1/10-bar | Water content: 1/3-bar | Water content: 15-bar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Pct | Pct | Pct | Pct | Pct | Pct | Pct | Pct | cm/hr | g/cc | Pct (wt) | Pct (wt) | Pct (wt) |
| Leon fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-006-1 | 0-15 | Ap | 0.4 | 8.2 | 27.5 | 55.5 | 6.3 | 97.9 | 1.2 | 0.9 | 78.6 | 1.16 | 15.3 | 12.0 | 4.4 |
| -2 | 15-28 | E1 | 0.7 | 6.9 | 24.1 | 58.2 | 7.4 | 97.3 | 2.3 | 0.4 | 18.6 | 1.64 | 4.9 | 2.7 | 0.4 |
| -3 | 28-64 | E2 | 0.7 | 6.8 | 21.4 | 60.1 | 8.0 | 97.0 | 2.2 | 0.8 | 19.5 | 1.64 | 3.5 | 2.1 | 0.2 |
| -4 | 64-76 | Bh1 | 1.0 | 7.0 | 21.1 | 56.3 | 7.0 | 92.4 | 5.8 | 1.8 | 27.2 | 1.56 | 11.5 | 7.3 | 1.8 |
| -5 | 76-86 | Bh2 | 1.3 | 7.1 | 24.7 | 54.4 | 5.9 | 93.4 | 5.4 | 1.2 | 18.4 | 1.63 | 8.0 | 5.5 | 1.3 |
| -6 | 86-142 | C1 | 0.7 | 7.2 | 22.3 | 58.2 | 6.1 | 94.5 | 3.7 | 1.8 | 17.8 | 1.65 | 6.0 | 3.7 | 0.7 |
| -7 | 142-203 | C2 | 0.8 | 7.2 | 22.5 | 58.7 | 7.2 | 96.4 | 2.7 | 0.9 | 23.2 | 1.76 | 4.4 | 2.3 | 0.4 |
| Lutterloh fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-003-1 | 0-20 | A | 0.0 | 1.6 | 13.2 | 74.0 | 7.8 | 96.6 | 1.5 | 1.9 | 38.4 | 1.33 | 8.6 | 5.4 | 1.4 |
| -2 | 20-48 | E1 | 0.1 | 2.5 | 13.0 | 73.5 | 6.6 | 95.7 | 2.0 | 2.3 | 28.5 | 1.53 | 5.7 | 3.6 | 1.2 |
| -3 | 48-91 | E2 | 0.1 | 2.4 | 12.6 | 73.2 | 8.2 | 96.5 | 2.0 | 1.5 | 35.3 | 1.58 | 3.2 | 1.9 | 0.3 |
| -4 | 91-130 | E3 | 0.1 | 2.0 | 12.0 | 74.1 | 8.4 | 96.6 | 1.2 | 2.2 | 26.1 | 1.62 | 3.7 | 2.0 | 0.5 |
| -5 | 130-162 | Bt | 0.0 | 2.2 | 11.8 | 63.8 | 9.4 | 87.2 | 2.0 | 10.8 | 1.5 | 1.72 | 9.5 | 6.4 | 3.3 |
| Lynn Haven mucky fine sand:[3] | | | | | | | | | | | | | | | |
| S89FL-067-004-1 | 0-33 | Ap | 0.1 | 1.5 | 11.8 | 62.2 | 10.4 | 86.0 | 11.0 | 3.1 | 46.7 | 0.80 | 50.9 | 38.9 | 11.5 |
| -2 | 33-48 | E | 0.0 | 1.2 | 10.6 | 74.8 | 11.7 | 98.3 | 1.0 | 0.7 | 20.4 | 1.60 | 4.0 | 1.8 | 0.4 |
| -3 | 48-69 | Bh | 0.0 | 1.2 | 10.3 | 68.7 | 10.7 | 90.9 | 4.5 | 4.6 | 32.9 | 1.55 | 16.0 | 9.4 | 2.2 |
| -4 | 69-86 | Bw1 | 0.1 | 1.4 | 10.8 | 69.0 | 10.3 | 91.6 | 4.3 | 4.1 | 25.0 | 1.54 | 11.7 | 8.3 | 2.1 |
| -5 | 86-132 | Bw2 | 0.0 | 0.1 | 11.7 | 71.0 | 9.2 | 92.0 | 5.0 | 3.0 | 24.7 | 1.60 | 7.5 | 4.6 | 1.3 |
| -6 | 132-203 | B'h | 0.1 | 1.3 | 11.6 | 69.2 | 7.8 | 90.0 | 6.1 | 3.9 | 15.8 | 1.59 | 13.9 | 10.6 | 3.6 |
| Mandarin fine sand:[5] | | | | | | | | | | | | | | | |
| S90FL-123-014-1 | 0-18 | Ap | 1.1 | 4.2 | 7.2 | 76.6 | 7.7 | 96.8 | 2.3 | 0.9 | 22.4 | 1.45 | 7.9 | 4.9 | 2.3 |
| -2 | 18-38 | E1 | 1.3 | 4.5 | 7.2 | 75.8 | 8.6 | 97.4 | 2.2 | 0.4 | 19.7 | 1.54 | 4.6 | 2.4 | 0.9 |
| -3 | 38-66 | E2 | 1.2 | 3.8 | 6.8 | 76.6 | 8.2 | 96.6 | 2.7 | 0.7 | 18.4 | 1.54 | 4.2 | 2.1 | 0.6 |
| -4 | 66-76 | Bh1 | 2.0 | 4.9 | 7.1 | 70.6 | 6.6 | 91.2 | 5.2 | 3.6 | 16.1 | 1.39 | 14.0 | 9.6 | 2.3 |
| -5 | 76-112 | Bh2 | 1.4 | 4.1 | 6.4 | 74.5 | 7.6 | 94.0 | 3.8 | 2.2 | 32.9 | 1.39 | 10.7 | 7.1 | 1.6 |
| -6 | 112-203 | C | 1.5 | 4.8 | 6.9 | 76.1 | 7.8 | 97.1 | 2.5 | 0.4 | 25.7 | 1.58 | 4.3 | 2.1 | 0.4 |
| Mascotte sand:[2] | | | | | | | | | | | | | | | |
| S81FL-065-029-1 | 0-20 | Ap | 0.2 | 9.7 | 28.7 | 42.1 | 11.2 | 91.9 | 6.6 | 1.5 | 5.3 | 1.49 | 13.4 | 7.7 | 1.4 |
| -2 | 20-25 | Bh1 | 0.4 | 12.7 | 29.5 | 39.0 | 10.8 | 92.4 | 3.3 | 4.3 | 27.9 | 1.47 | 13.6 | 9.5 | 1.9 |
| -3 | 25-41 | Bh2 | 0.8 | 18.2 | 31.4 | 30.8 | 7.8 | 89.0 | 6.3 | 4.7 | 4.5 | 1.48 | 16.4 | 12.4 | 3.4 |
| -4 | 41-66 | E | 0.1 | 1.6 | 15.1 | 54.5 | 17.5 | 88.8 | 8.2 | 3.0 | 4.5 | 1.62 | 11.4 | 7.9 | 1.8 |
| -5 | 66-135 | Btg1 | 0.2 | 7.4 | 20.6 | 28.6 | 9.0 | 65.8 | 0.7 | 33.5 | 0.4 | 1.58 | 19.2 | 17.2 | 9.6 |
| -6 | 135-203 | Btg2 | 0.4 | 7.4 | 19.0 | 27.6 | 9.0 | 63.4 | 5.6 | 31.0 | 0.1 | 1.81 | 14.1 | 12.2 | 6.9 |
| Meadowbrook sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-020-1 | 0-23 | Ap | 0.3 | 5.2 | 22.6 | 50.0 | 18.4 | 96.5 | 1.8 | 1.7 | 16.8 | 1.45 | 9.4 | 5.3 | 1.4 |
| -2 | 23-46 | Bw1 | 0.3 | 4.3 | 20.4 | 59.2 | 18.0 | 97.2 | 1.9 | 0.9 | 22.0 | 1.67 | 4.6 | 2.0 | 0.4 |
| -3 | 46-79 | Bw2 | 0.4 | 4.8 | 20.5 | 50.7 | 15.8 | 92.2 | 6.9 | 0.9 | 13.2 | 1.69 | 5.7 | 3.0 | 0.6 |
| -4 | 79-147 | E | 0.4 | 4.7 | 19.5 | 51.4 | 21.0 | 97.0 | 2.6 | 0.4 | 14.1 | 1.75 | 4.5 | 1.9 | 0.2 |
| -5 | 147-203 | Btg | 0.2 | 3.0 | 16.6 | 35.6 | 9.8 | 65.2 | 11.5 | 23.2 | 0.1 | 1.38 | 36.4 | 33.0 | 20.1 |

See footnotes at end of table.

Table 17.--Physical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Particle-size distribution: Sand: Very coarse (2-1 mm) | Sand: Coarse (1-0.5 mm) | Sand: Medium (0.5-0.25 mm) | Sand: Fine (0.25-0.1 mm) | Sand: Very fine (0.1-0.05 mm) | Sand: Total (2-0.05 mm) | Silt (0.05-0.002 mm) | Clay (<0.002 mm) | Hydraulic conductivity | Bulk density (field moist) | Water content: 1/10-bar | Water content: 1/3-bar | Water content: 15-bar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Pct | Pct | Pct | Pct | Pct | Pct | Pct | Pct | cm/hr | g/cc | Pct (wt) | Pct (wt) | Pct (wt) |
| Melvina fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-018-1 | 0-15 | Ap | 1.5 | 5.9 | 7.4 | 75.8 | 6.8 | 97.4 | 0.6 | 2.0 | 28.0 | 1.43 | 6.5 | 3.9 | 2.0 |
| -2 | 15-71 | E | 2.1 | 6.5 | 7.3 | 73.8 | 7.3 | 97.0 | 2.4 | 0.6 | 20.1 | 1.58 | 3.6 | 2.1 | 0.7 |
| -3 | 71-81 | Bh1 | 2.2 | 5.7 | 6.6 | 71.5 | 7.3 | 93.3 | 3.9 | 2.8 | 13.2 | 1.52 | 9.4 | 6.4 | 1.7 |
| -4 | 81-99 | Bh2 | 2.0 | 5.8 | 6.7 | 72.8 | 7.3 | 94.6 | 3.7 | 1.7 | 16.1 | 1.79 | 5.9 | 3.7 | 1.0 |
| -5 | 99-135 | EB | 2.0 | 5.8 | 6.4 | 74.6 | 7.3 | 96.1 | 2.7 | 1.2 | 17.4 | 1.61 | 5.2 | 2.9 | 0.6 |
| -6 | 135-170 | Btg1 | 1.4 | 4.4 | 6.2 | 57.4 | 5.8 | 75.2 | 2.2 | 22.6 | 1.7 | 1.69 | 18.4 | 15.0 | 6.4 |
| -7 | 170-203 | Btg2 | 0.6 | 3.0 | 4.8 | 44.6 | 4.8 | 57.8 | 5.4 | 36.8 | 0.2 | 1.14 | 46.6 | 41.8 | 19.3 |
| Moriah fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-013-1 | 0-13 | A | 0.4 | 2.2 | 5.3 | 81.7 | 7.8 | 97.4 | 1.8 | 0.8 | 28.9 | 1.47 | 6.5 | 3.6 | 1.0 |
| -2 | 13-30 | E1 | 0.7 | 2.5 | 6.0 | 81.7 | 7.5 | 98.4 | 1.2 | 0.4 | 29.6 | 1.57 | 4.0 | 2.1 | 0.6 |
| -3 | 30-79 | E2 | 0.6 | 2.4 | 5.9 | 82.4 | 6.6 | 97.9 | 1.7 | 0.4 | 30.3 | 1.53 | 3.7 | 1.8 | 0.6 |
| -4 | 79-86 | E3 | 1.0 | 3.6 | 10.2 | 75.6 | 3.6 | 94.0 | 5.1 | 0.9 | 27.0 | 1.55 | 3.4 | 1.6 | 0.6 |
| -5 | 86-132 | Bt1 | 0.8 | 5.4 | 19.4 | 38.6 | 2.0 | 61.2 | 5.8 | 33.0 | 2.3 | 1.60 | 25.5 | 21.2 | 9.3 |
| -6 | 132-145 | Bt2 | 1.4 | 7.2 | 23.2 | 34.4 | 2.2 | 68.4 | 3.2 | 28.4 | 0.0 | 1.50 | 20.7 | 17.7 | 8.2 |
| Nutall fine sand:[2] | | | | | | | | | | | | | | | |
| S82FL-065-007-1 | 0-10 | A | 0.0 | 0.2 | 4.7 | 73.0 | 12.8 | 90.7 | 5.9 | 3.4 | --- | --- | --- | --- | --- |
| -2 | 10-23 | A/E | 0.0 | 0.4 | 4.9 | 77.2 | 12.6 | 95.1 | 3.5 | 1.4 | --- | --- | --- | --- | --- |
| -3 | 23-33 | E1 | 0.0 | 0.5 | 5.5 | 79.2 | 11.9 | 97.1 | 1.6 | 1.3 | --- | --- | --- | --- | --- |
| -4 | 33-43 | E2 | 0.0 | 0.6 | 4.9 | 77.9 | 12.4 | 95.8 | 2.8 | 1.4 | --- | --- | --- | --- | --- |
| -5 | 43-76 | Btg | 0.0 | 0.2 | 3.6 | 55.8 | 11.0 | 70.6 | 5.9 | 23.5 | --- | --- | --- | --- | --- |
| Ocilla sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-015-1 | 0-15 | A | 0.3 | 4.3 | 23.3 | 47.8 | 16.4 | 92.1 | 3.9 | 4.0 | 8.9 | 1.56 | 10.1 | 5.6 | 1.8 |
| -2 | 15-58 | E | 0.2 | 4.6 | 22.2 | 44.9 | 19.3 | 91.2 | 5.2 | 3.6 | 5.8 | 1.67 | 9.7 | 5.5 | 1.8 |
| -3 | 58-71 | Bt | 0.2 | 3.6 | 20.0 | 43.8 | 13.6 | 81.2 | 4.6 | 14.2 | 2.1 | 1.65 | 14.5 | 11.2 | 6.8 |
| -4 | 71-119 | Btg1 | 0.2 | 1.2 | 13.8 | 48.8 | 12.0 | 76.0 | 3.1 | 20.9 | 1.5 | 1.72 | 15.5 | 12.6 | 8.1 |
| -5 | 119-175 | Btg2 | 0.0 | 5.8 | 33.4 | 32.6 | 7.6 | 79.4 | 4.8 | 15.8 | 0.2 | 1.83 | 13.9 | 11.3 | 7.1 |
| -6 | 175-203 | Cg | 0.2 | 6.6 | 35.2 | 34.2 | 8.2 | 84.4 | 3.1 | 12.5 | 0.6 | 1.83 | 11.1 | 7.7 | 4.4 |
| Ortega fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-010-1 | 0-13 | Ap | 0.0 | 1.0 | 11.5 | 81.1 | 5.0 | 98.6 | 0.6 | 0.8 | 27.6 | 1.50 | 5.9 | 3.9 | 0.9 |
| -2 | 13-51 | C1 | 0.0 | 1.1 | 12.4 | 80.3 | 4.4 | 98.2 | 0.8 | 1.0 | 48.7 | 1.52 | 4.2 | 2.4 | 0.4 |
| -3 | 51-107 | C2 | 0.1 | 1.2 | 10.8 | 80.6 | 5.3 | 98.0 | 1.0 | 1.0 | 54.6 | 1.51 | 3.7 | 2.2 | 0.4 |
| -4 | 107-155 | C3 | 0.1 | 1.2 | 11.1 | 81.6 | 4.6 | 98.6 | 0.6 | 0.8 | 43.4 | 1.60 | 3.3 | 1.7 | 0.2 |
| -5 | 155-203 | C4 | 0.1 | 1.4 | 11.2 | 81.8 | 4.5 | 99.0 | 0.5 | 0.5 | 53.9 | 1.49 | 2.7 | 1.9 | 0.2 |
| Osier fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-007-1 | 0-13 | Ap | 0.6 | 7.8 | 25.4 | 55.1 | 6.4 | 95.3 | 2.1 | 2.6 | 43.4 | 1.40 | 9.5 | 6.2 | 1.4 |
| -2 | 13-46 | C1 | 0.5 | 7.2 | 24.3 | 55.7 | 7.1 | 94.8 | 2.4 | 2.8 | 36.9 | 1.55 | 6.4 | 4.0 | 0.9 |
| -3 | 46-64 | C2 | 1.0 | 8.6 | 24.6 | 55.9 | 6.1 | 96.2 | 1.2 | 2.6 | 46.0 | 1.62 | 4.7 | 2.9 | 0.7 |
| -4 | 64-127 | C3 | 0.8 | 7.2 | 22.5 | 59.1 | 7.2 | 96.8 | 1.0 | 2.2 | 41.5 | 1.70 | 3.8 | 2.3 | 0.5 |
| -5 | 127-203 | C4 | 0.2 | 5.2 | 21.0 | 66.5 | 6.3 | 98.2 | 0.8 | 1.0 | 36.2 | 1.68 | 2.8 | 1.6 | 0.2 |
| Otela fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-016-1 | 0-18 | Ap | 0.2 | 2.0 | 10.6 | 55.7 | 24.0 | 92.5 | 5.0 | 2.5 | 9.0 | 1.53 | 11.9 | 6.0 | 1.6 |
| -2 | 18-71 | E1 | 0.2 | 2.0 | 9.9 | 53.4 | 25.9 | 91.4 | 6.9 | 1.7 | 10.8 | 1.56 | 9.3 | 4.3 | 3.1 |
| -3 | 71-119 | E2 | 0.3 | 2.1 | 9.7 | 53.5 | 26.2 | 91.8 | 5.8 | 2.4 | 16.0 | 1.56 | 12.9 | 3.4 | 0.7 |
| -4 | 119-137 | Bt1 | 0.2 | 1.6 | 7.2 | 43.2 | 29.0 | 81.2 | 7.6 | 11.2 | 1.2 | 1.75 | 12.9 | 8.5 | 3.8 |
| -5 | 137-160 | Bt2 | 0.2 | 1.2 | 6.8 | 41.4 | 25.6 | 75.2 | 8.6 | 16.2 | 0.6 | 1.73 | 16.2 | 11.4 | 5.3 |
| -6 | 160-203 | Bt3 | 0.4 | 1.4 | 6.4 | 35.4 | 20.6 | 64.2 | 8.5 | 27.3 | 0.2 | 1.56 | 22.5 | 19.1 | 10.9 |

See footnotes at end of table.

Table 17.--Physical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Particle-size distribution: Sand: Very coarse (2-1 mm) | Sand: Coarse (1-0.5 mm) | Sand: Medium (0.5-0.25 mm) | Sand: Fine (0.25-0.1 mm) | Sand: Very fine (0.1-0.05 mm) | Sand: Total (2-0.05 mm) | Silt (0.05-0.002 mm) | Clay (<0.002 mm) | Hydraulic conductivity | Bulk density (field moist) | Water content: 1/10-bar | Water content: 1/3-bar | Water content: 15-bar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Pct | Pct | Pct | Pct | Pct | Pct | Pct | Pct | cm/hr | g/cc | Pct (wt) | Pct (wt) | Pct (wt) |
| Pamlico muck:[5] | | | | | | | | | | | | | | | |
| S88FL-123-017-1 | 0-23 | Oe&Oa1 | --- | --- | --- | --- | --- | --- | --- | --- | 71.4 | 0.23 | 285.3 | 232.8 | 46.4 |
| -2 | 23-56 | Oa2 | --- | --- | --- | --- | --- | --- | --- | --- | 184.0 | 0.22 | 307.6 | 248.7 | 40.9 |
| -3 | 56-64 | 2C1 | 0.1 | 1.4 | 8.4 | 74.2 | 10.7 | 94.8 | 3.2 | 2.0 | 21.0 | 1.45 | 11.5 | 7.4 | 2.1 |
| -4 | 64-152 | 2C2 | 0.1 | 1.6 | 8.2 | 74.1 | 10.8 | 94.8 | 3.4 | 1.8 | 14.5 | 1.61 | 6.1 | 3.2 | 0.8 |
| Plummer fine sand:[3] | | | | | | | | | | | | | | | |
| S90FL-067-013-1 | 0-18 | A | 0.2 | 3.0 | 14.6 | 60.3 | 16.1 | 94.2 | 4.4 | 1.4 | 24.3 | 1.33 | 12.3 | 7.5 | 2.5 |
| -2 | 18-36 | Eg1 | 0.3 | 2.7 | 12.4 | 60.7 | 17.1 | 93.2 | 4.5 | 2.3 | 17.1 | 1.54 | 12.1 | 7.6 | 1.6 |
| -3 | 36-56 | Eg2 | 0.3 | 2.7 | 11.5 | 63.4 | 17.1 | 95.0 | 3.1 | 1.9 | 12.7 | 1.63 | 7.7 | 4.0 | 0.8 |
| -4 | 56-140 | Eg3 | 0.3 | 3.3 | 11.8 | 61.6 | 19.2 | 96.2 | 3.1 | 0.7 | 14.0 | 1.67 | 6.2 | 2.7 | 0.4 |
| -5 | 140-203 | Btg | 0.3 | 2.5 | 10.2 | 51.3 | 14.5 | 78.8 | 5.8 | 15.4 | 0.3 | 1.79 | 14.5 | 11.6 | 5.1 |
| Resota sand:[1] | | | | | | | | | | | | | | | |
| S90FL-029-015-1 | 0-8 | A | 0.0 | 1.9 | 45.2 | 48.8 | 3.3 | 99.2 | 0.1 | 0.7 | 41.4 | 1.49 | 4.3 | 3.1 | 0.9 |
| -2 | 8-33 | E | 0.0 | 2.0 | 45.3 | 45.6 | 2.6 | 95.5 | 3.5 | 1.0 | 60.5 | 1.52 | 2.4 | 1.8 | 0.4 |
| -3 | 33-48 | Bw1 | 0.0 | 2.0 | 48.6 | 44.6 | 3.0 | 96.5 | 0.6 | 2.8 | 69.1 | 1.38 | 6.3 | 4.7 | 1.7 |
| -4 | 48-94 | Bw2 | 0.0 | 2.0 | 45.5 | 46.4 | 2.9 | 96.8 | 2.4 | 0.8 | 107.0 | 1.48 | 2.6 | 1.8 | 0.7 |
| -5 | 94-140 | Bw3 | 0.0 | 2.2 | 46.5 | 46.0 | 3.2 | 97.9 | 1.3 | 0.8 | 77.6 | 1.56 | 2.1 | 1.3 | 0.4 |
| -6 | 140-203 | C | 0.0 | 1.4 | 42.4 | 50.5 | 4.0 | 98.3 | 1.0 | 0.7 | 47.4 | 1.57 | 2.4 | 1.4 | 0.3 |
| Ridgewood fine sand:[5] | | | | | | | | | | | | | | | |
| S88FL-123-011-1 | 0-18 | Ap | 0.0 | 1.2 | 12.0 | 81.1 | 4.8 | 99.1 | 0.0 | 0.9 | 39.5 | 1.46 | 5.2 | 3.5 | 0.8 |
| -2 | 18-41 | C1 | 0.0 | 0.9 | 10.2 | 81.2 | 5.1 | 97.4 | 1.8 | 0.8 | 41.8 | 1.49 | 4.2 | 2.4 | 0.5 |
| -3 | 41-91 | C2 | 0.1 | 1.1 | 11.0 | 79.8 | 5.2 | 97.2 | 1.7 | 1.1 | 43.4 | 1.45 | 4.2 | 2.7 | 0.3 |
| -4 | 91-135 | C3 | 0.1 | 1.2 | 9.3 | 82.9 | 5.2 | 98.7 | 0.9 | 0.4 | 43.4 | 1.52 | 3.0 | 2.3 | 0.4 |
| -5 | 135-203 | C4 | 0.1 | 1.2 | 9.5 | 84.9 | 3.8 | 99.5 | 0.1 | 0.4 | 59.2 | 1.45 | 2.5 | 1.6 | 0.2 |
| Sapelo fine sand:[3] | | | | | | | | | | | | | | | |
| S89FL-067-007-1 | 0-15 | Ap | 0.1 | 2.1 | 12.2 | 60.0 | 22.0 | 96.5 | 2.8 | 0.8 | 47.3 | 1.26 | 12.4 | 7.3 | 2.6 |
| -2 | 15-33 | E1 | 0.2 | 2.5 | 13.1 | 58.1 | 21.0 | 94.9 | 4.3 | 0.8 | 23.4 | 1.46 | 8.5 | 4.4 | 1.4 |
| -3 | 33-71 | E2 | 0.2 | 2.4 | 10.9 | 61.1 | 22.6 | 97.2 | 2.5 | 0.3 | 21.1 | 1.52 | 4.4 | 1.9 | 0.6 |
| -4 | 71-86 | Bh1 | 0.2 | 2.8 | 11.2 | 55.2 | 21.3 | 90.7 | 4.7 | 4.6 | 31.2 | 1.54 | 14.0 | 8.4 | 2.2 |
| -5 | 86-114 | Bh2 | 0.2 | 1.8 | 9.9 | 60.5 | 23.0 | 95.4 | 2.9 | 1.7 | 28.0 | 1.57 | 10.5 | 6.2 | 1.5 |
| -6 | 114-152 | E' | 0.2 | 2.7 | 10.7 | 58.8 | 23.1 | 95.5 | 2.7 | 1.8 | 8.9 | 1.66 | 6.6 | 3.2 | 0.6 |
| -7 | 152-185 | Btg | 0.2 | 1.8 | 8.6 | 38.6 | 24.8 | 74.0 | 3.3 | 22.7 | 0.5 | 1.73 | 16.7 | 13.9 | 7.8 |
| -8 | 185-203 | BCg | 0.1 | 1.8 | 12.3 | 53.0 | 14.5 | 81.7 | 2.8 | 15.5 | 0.2 | 1.76 | 15.9 | 10.9 | 5.9 |
| Tennille fine sand:[1] | | | | | | | | | | | | | | | |
| S90FL-029-018-1 | 0-15 | A | 0.3 | 1.9 | 6.2 | 79.2 | 5.8 | 93.4 | 1.6 | 5.0 | 109.6 | 0.46 | 95.5 | 72.1 | 23.7 |
| -2 | 15-35 | C | 0.9 | 3.2 | 5.7 | 80.5 | 6.4 | 96.7 | 1.8 | 1.5 | 23.7 | 1.55 | 5.9 | 3.1 | 0.4 |

See footnotes at end of table.

Table 17.--Physical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Particle-size distribution: Sand: Very coarse (2-1 mm) | Sand: Coarse (1-0.5 mm) | Sand: Medium (0.5-0.25 mm) | Sand: Fine (0.25-0.1 mm) | Sand: Very fine (0.1-0.05 mm) | Sand: Total (2-0.05 mm) | Silt (0.05-0.002 mm) | Clay (<0.002 mm) | Hydraulic conductivity | Bulk density (field moist) | Water content: 1/10-bar | Water content: 1/3-bar | Water content: 15-bar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Pct | Pct | Pct | Pct | Pct | Pct | Pct | Pct | cm/hr | g/cc | Pct (wt) | Pct (wt) | Pct (wt) |
| Tooles fine sand:[1] | | | | | | | | | | | | | | | |
| S90FL-029-006-1 | 0-20 | Ap | 0.2 | 4.4 | 21.2 | 63.1 | 6.8 | 95.6 | 0.9 | 3.5 | 27.0 | 1.47 | 7.7 | 4.8 | 1.3 |
| -2 | 20-58 | Bw1 | 0.4 | 5.4 | 26.9 | 61.5 | 3.3 | 97.5 | 1.7 | 0.8 | 16.1 | 1.64 | 4.5 | 2.5 | 0.2 |
| -3 | 58-89 | Bw2 | 0.5 | 6.0 | 24.9 | 61.2 | 4.3 | 96.9 | 2.3 | 0.8 | 10.5 | 1.71 | 7.2 | 5.3 | 1.3 |
| -4 | 89-117 | Btg | 0.2 | 3.6 | 20.3 | 45.5 | 2.1 | 71.7 | 3.6 | 27.4 | 2.3 | 1.54 | 23.8 | 21.9 | 9.9 |
| Wekiva fine sand:[1] | | | | | | | | | | | | | | | |
| S90FL-029-010-1 | 0-15 | Ap | 0.2 | 3.4 | 22.5 | 52.0 | 14.0 | 92.1 | 3.8 | 4.1 | 40.4 | 1.06 | 29.3 | 23.1 | 6.6 |
| -2 | 15-36 | E | 0.8 | 5.8 | 24.0 | 51.2 | 13.2 | 95.0 | 3.4 | 1.6 | 6.6 | 1.72 | 5.9 | 3.4 | 0.9 |
| -3 | 36-53 | Bt | 1.4 | 7.0 | 21.2 | 42.6 | 9.8 | 82.0 | 3.4 | 14.6 | 0.5 | 1.74 | 14.8 | 12.4 | 5.1 |

[1] The soil is the typical pedon as sampled in Dixie County, Florida. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

[2] The soil is the typical pedon as sampled in Jefferson County, Florida. For the location of the sample site, see the series description in the section Soil Series and Their Morphology."

[3] The soil is the typical pedon as sampled in Lafayette County, Florida. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

[4] The soil is the typical pedon as sampled in Madison County, Florida. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

[5] The soil is the typical pedon as sampled in Taylor County, Florida. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

[6] This soil is not the typical pedon for the series, however, it is the typical pedon for Chaires fine sand, limestone substratum, as sampled in Taylor County, Florida. Location is SW1/4SE1/4 sec. 28, T. 7 S., R. 9 E.

## Table 18.--Chemical Analyses of Selected Soils

(Each of the soils is the typical pedon for the series in this survey area. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology.")

| Soil name and sample number | Depth | Horizon | Extractable bases: Ca | Mg | Na | K | Sum | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH: $H_2O$ (1:1) | $CaCl_2$ 0.01M (1:2) | KCl 1N (1:1) | Pyrophosphate extractable: C | Fe | Al | Citrate-dithionite extractable: Fe | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | ----Milliequivalents/100 grams of soil----- | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Albany sand:[4] | | | | | | | | | | | | | | | | | | | | |
| S84FL-040-012-1 | 0-25 | Ap | 0.40 | 0.02 | 0.03 | 0.04 | 0.49 | 9.02 | 9.51 | 5 | 1.03 | 0.06 | 4.5 | 4.3 | 3.9 | --- | --- | --- | --- | --- |
| -2 | 25-66 | E1 | 0.09 | 0.01 | 0.02 | 0.02 | 0.14 | 4.90 | 5.04 | 3 | 0.36 | 0.04 | 4.7 | 4.4 | 4.4 | --- | --- | --- | --- | --- |
| -3 | 66-94 | E2 | 0.04 | 0.01 | 0.03 | 0.02 | 0.10 | 2.89 | 2.99 | 3 | 0.13 | 0.04 | 4.7 | 4.7 | 4.7 | --- | --- | --- | --- | --- |
| -4 | 94-127 | E3 | 0.05 | 0.01 | 0.02 | 0.02 | 0.10 | 1.51 | 1.61 | 6 | 0.06 | 0.04 | 4.5 | 4.7 | 4.7 | --- | --- | --- | --- | --- |
| -5 | 127-145 | Bt | 0.36 | 0.03 | 0.04 | 0.05 | 0.48 | 3.66 | 4.14 | 12 | 0.07 | 0.04 | 4.5 | 4.2 | 4.2 | --- | --- | --- | 0.18 | 0.07 |
| -6 | 145-175 | Btg1 | 0.64 | 0.23 | 0.05 | 0.09 | 1.01 | 8.48 | 9.49 | 11 | 0.07 | 0.06 | 4.1 | 3.9 | 3.9 | --- | --- | --- | 0.20 | 0.08 |
| -7 | 175-203 | Btg2 | 0.29 | 0.08 | 0.04 | 0.08 | 0.49 | 7.58 | 8.07 | 6 | 0.04 | 0.06 | 4.1 | 3.9 | 3.9 | --- | --- | --- | 0.14 | 0.29 |
| Chaires fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88-123-005-1 | 0-15 | Ap | 0.82 | 0.41 | 0.04 | 0.04 | 1.31 | 9.11 | 10.42 | 13 | 2.44 | 0.06 | 3.8 | 3.1 | 2.9 | --- | --- | --- | --- | --- |
| -2 | 15-51 | E | 0.08 | 0.01 | 0.01 | 0.00 | 0.10 | 4.06 | 4.16 | 2 | 0.28 | 0.03 | 4.4 | 3.8 | 3.8 | --- | --- | --- | --- | --- |
| -3 | 51-66 | Bh1 | 0.04 | 0.06 | 0.03 | 0.01 | 0.14 | 18.95 | 19.09 | 1 | 2.17 | 0.04 | 3.9 | 3.3 | 3.2 | 1.15 | 0.01 | 0.12 | 0.02 | 0.07 |
| -4 | 66-76 | Bh2 | 0.03 | 0.02 | 0.02 | 0.01 | 0.08 | 13.34 | 13.42 | 1 | 1.12 | 0.03 | 4.3 | 3.7 | 3.6 | 0.86 | 0.01 | 0.16 | 0.01 | 0.10 |
| -5 | 76-132 | E' | 0.05 | 0.02 | 0.01 | 0.01 | 0.09 | 10.20 | 10.29 | 1 | 0.74 | 0.02 | 4.3 | 4.0 | 3.9 | --- | --- | --- | --- | --- |
| -6 | 132-203 | Btg | 7.75 | 5.35 | 0.05 | 0.06 | 13.21 | 7.07 | 20.28 | 65 | 0.40 | 0.04 | 5.7 | 5.2 | 5.1 | --- | --- | --- | 0.14 | 0.05 |
| Chaires fine sand, limestone substratum:[6] | | | | | | | | | | | | | | | | | | | | |
| S88-123-008 -1 | 0-15 | Ap | 1.32 | 0.34 | 0.03 | 0.03 | 1.72 | 8.22 | 9.94 | 17 | 1.76 | 0.05 | 3.9 | 3.2 | 3.3 | --- | --- | --- | --- | --- |
| -2 | 15-64 | E | 0.04 | 0.01 | 0.00 | 0.00 | 0.05 | 0.50 | 0.55 | 9 | 0.12 | 0.01 | 4.4 | 3.7 | 3.8 | --- | --- | --- | --- | --- |
| -3 | 64-74 | Bh1 | 0.12 | 0.07 | 0.02 | 0.00 | 0.21 | 11.38 | 11.59 | 2 | 1.07 | 0.02 | 4.0 | 3.2 | 3.3 | 1.06 | 0.01 | 0.08 | 0.02 | 0.05 |
| -4 | 74-104 | Bh2 | 0.06 | 0.04 | 0.02 | 0.00 | 0.12 | 9.31 | 9.43 | 1 | 0.89 | 0.02 | 4.1 | 3.5 | 3.6 | 0.71 | 0.01 | 0.09 | 0.02 | 0.06 |
| -5 | 104-112 | E' | 0.21 | 0.03 | 0.00 | 0.00 | 0.24 | 4.55 | 4.79 | 5 | 0.45 | 0.01 | 4.9 | 4.3 | 4.6 | --- | --- | --- | --- | --- |
| -6 | 112-140 | Btg | 7.50 | 7.94 | 0.08 | 0.05 | 15.57 | 3.50 | 19.07 | 78 | 0.49 | 0.04 | 5.8 | 5.4 | 5.4 | --- | --- | --- | 0.44 | 0.08 |
| Chiefland sand:[1] | | | | | | | | | | | | | | | | | | | | |
| S90FL-029-017-1 | 0-13 | A | 4.58 | 0.30 | 0.00 | 0.02 | 4.90 | 1.39 | 6.29 | 88 | 1.87 | 0.07 | 6.7 | 6.2 | 6.1 | --- | --- | --- | --- | --- |
| -2 | 13-43 | E1 | 1.17 | 0.02 | 0.00 | 0.00 | 1.19 | 0.23 | 1.42 | 84 | 0.19 | 0.02 | 6.7 | 6.5 | 6.1 | --- | --- | --- | --- | --- |
| -3 | 43-66 | E2 | 0.60 | 0.03 | 0.00 | 0.00 | 0.63 | 0.03 | 0.66 | 95 | 0.10 | 0.02 | 6.9 | 6.2 | 6.1 | --- | --- | --- | --- | --- |
| -4 | 66-89 | Bt | 9.50 | 0.18 | 0.00 | 0.03 | 9.71 | 2.96 | 12.67 | 77 | 0.23 | 0.05 | 6.6 | 6.3 | 6.0 | --- | --- | --- | --- | --- |

See footnotes at end of table.

Table 18.--Chemical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Extractable bases: Ca | Mg | Na | K | Sum | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH: $H_2O$ (1:1) | $CaCl_2$ 0.01M (1:2) | KCl 1N (1:1) | Pyrophosphate extractable: C | Fe | Al | Citrate-dithionite extractable: Fe | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | Milliequivalents/100 grams of soil | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Chipley sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-009-1 | 0-23 | Ap | 1.10 | 0.10 | 0.01 | 0.01 | 1.22 | 5.35 | 6.57 | 19 | 1.03 | 0.02 | 5.2 | 4.5 | 4.4 | --- | --- | --- | --- | --- |
| -2 | 23-51 | C1 | 0.28 | 0.02 | 0.01 | 0.00 | 0.31 | 2.71 | 3.02 | 10 | 0.22 | 0.04 | 4.9 | 4.7 | 4.7 | --- | --- | --- | --- | --- |
| -3 | 51-122 | C2 | 0.20 | 0.02 | 0.01 | 0.01 | 0.24 | 1.29 | 1.53 | 16 | 0.09 | 0.02 | 4.9 | 4.5 | 4.6 | --- | --- | --- | --- | --- |
| -4 | 122-175 | C3 | 0.07 | 0.01 | 0.00 | 0.00 | 0.08 | 0.36 | 0.44 | 18 | 0.04 | 0.02 | 4.8 | 4.6 | 4.7 | --- | --- | --- | --- | --- |
| -5 | 175-203 | C4 | 0.07 | 0.03 | 0.01 | 0.00 | 0.11 | 0.40 | 0.51 | 22 | 0.04 | 0.01 | 4.7 | 4.4 | 4.6 | | | | | |
| Hurricane fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-012-1 | 0-20 | Ap | 0.11 | 0.02 | 0.04 | 0.02 | 0.19 | 5.08 | 5.27 | 4 | 1.38 | 0.04 | 4.2 | 3.9 | 3.8 | --- | --- | --- | --- | --- |
| -2 | 20-56 | E1 | 0.03 | 0.00 | 0.00 | 0.00 | 0.03 | 11.61 | 1.64 | 2 | 0.24 | 0.03 | 4.3 | 4.4 | 4.4 | --- | --- | --- | --- | --- |
| -3 | 56-81 | E2 | 0.03 | 0.01 | 0.02 | 0.01 | 0.07 | 0.52 | 0.59 | 12 | 0.14 | 0.04 | 4.4 | 4.4 | 4.5 | --- | --- | --- | --- | --- |
| -4 | 81-122 | E3 | 0.02 | 0.01 | 0.01 | 0.00 | 0.04 | 0.89 | 0.93 | 4 | 0.03 | 0.03 | 4.5 | 4.4 | 4.5 | --- | --- | --- | --- | --- |
| -5 | 122-160 | E4 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 | 0.66 | 0.70 | 6 | 0.01 | 0.01 | 4.7 | 4.6 | 4.7 | --- | --- | --- | --- | --- |
| -6 | 160-175 | BE | 0.04 | 0.00 | 0.00 | 0.01 | 0.05 | 1.30 | 1.35 | 4 | 0.06 | 0.02 | 4.5 | 4.3 | 4.5 | --- | --- | --- | --- | --- |
| -7 | 175-203 | Bh | 0.03 | 0.00 | 0.00 | 0.01 | 0.04 | 3.02 | 3.06 | 1 | 0.08 | 0.02 | 4.3 | 4.3 | 4.5 | 0.12 | 0.01 | 0.05 | 0.02 | 0.03 |
| Leon fine sand:5 | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-006-1 | 0-15 | Ap | 0.90 | 0.23 | 0.03 | 0.03 | 1.19 | 10.92 | 12.11 | 10 | 1.98 | 0.05 | 3.9 | 3.2 | 3.3 | --- | --- | --- | --- | --- |
| -2 | 15-28 | E1 | 0.19 | 0.03 | 0.01 | 0.01 | 0.24 | 1.65 | 1.89 | 13 | 0.40 | 0.02 | 4.2 | 3.4 | 3.6 | --- | --- | --- | --- | --- |
| -3 | 28-64 | E2 | 0.05 | 0.01 | 0.00 | 0.00 | 0.06 | 1.07 | 1.13 | 5 | 0.17 | 0.01 | 4.6 | 3.7 | 3.9 | --- | --- | --- | --- | --- |
| -4 | 64-76 | Bh1 | 0.29 | 0.07 | 0.03 | 0.01 | 0.40 | 17.61 | 18.01 | 2 | 1.67 | 0.03 | 4.1 | 3.2 | 3.2 | 1.43 | 0.01 | 0.10 | 0.02 | 0.09 |
| -5 | 76-86 | Bh2 | 0.17 | 0.04 | 0.01 | 0.01 | 0.23 | 14.87 | 15.10 | 2 | 1.73 | 0.02 | 4.1 | 3.5 | 3.4 | 1.16 | 0.01 | 0.13 | 0.01 | 0.09 |
| -6 | 86-142 | C1 | 0.04 | 0.02 | 0.00 | 0.01 | 0.07 | 4.96 | 5.03 | 1 | 0.45 | 0.02 | 4.4 | 3.9 | 3.8 | --- | --- | --- | --- | --- |
| -7 | 142-203 | C2 | 0.05 | 0.01 | 0.01 | 0.00 | 0.08 | 1.95 | 2.03 | 4 | 0.26 | 0.01 | 4.8 | 4.0 | 4.1 | --- | --- | --- | --- | --- |
| Lutterloh fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-003-1 | 0-20 | A | 1.35 | 0.16 | 0.03 | 0.02 | 1.56 | 5.45 | 7.01 | 22 | 1.26 | 0.05 | 5.3 | 4.4 | 4.4 | --- | --- | --- | --- | --- |
| -2 | 20-48 | E1 | 0.22 | 0.02 | 0.02 | 0.01 | 0.27 | 2.81 | 3.08 | 9 | 0.22 | 0.02 | 5.4 | 4.7 | 4.8 | --- | --- | --- | --- | --- |
| -3 | 48-91 | E2 | 0.19 | 0.00 | 0.00 | 0.00 | 0.19 | 0.96 | 1.15 | 17 | 0.16 | 0.02 | 5.5 | 4.9 | 4.9 | --- | --- | --- | --- | --- |
| -4 | 91-130 | E3 | 0.19 | 0.01 | 0.01 | 0.00 | 0.21 | 0.95 | 1.16 | 18 | 0.21 | 0.02 | 5.6 | 4.9 | 4.9 | --- | --- | --- | --- | --- |
| -5 | 130-162 | Bt | 3.75 | 0.03 | 0.03 | 0.02 | 3.83 | 3.99 | 7.82 | 49 | 0.00 | 0.03 | 6.1 | 5.5 | 5.4 | --- | --- | --- | 0.08 | 0.05 |
| Lynn Haven mucky fine sand:[3] | | | | | | | | | | | | | | | | | | | | |
| S89FL-067-004-1 | 0-33 | Ap | 0.44 | 0.82 | 0.21 | 0.22 | 1.69 | 42.04 | 43.73 | 4 | 6.40 | 0.09 | 3.9 | 2.9 | 2.3 | --- | --- | --- | --- | --- |
| -2 | 33-48 | E | 0.02 | 0.02 | 0.01 | 0.00 | 0.05 | 0.85 | 0.90 | 6 | 0.23 | 0.18 | 4.8 | 3.8 | 3.3 | --- | --- | --- | --- | --- |
| -3 | 48-69 | Bh | 0.03 | 0.10 | 0.05 | 0.01 | 0.19 | 18.24 | 18.43 | 1 | 1.71 | 0.19 | 4.3 | 3.2 | 2.8 | 1.36 | 0.00 | 0.12 | 0.04 | 0.10 |
| -4 | 69-86 | Bw1 | 0.02 | 0.02 | 0.04 | 0.01 | 0.09 | 7.12 | 7.21 | 1 | 0.72 | 0.11 | 5.2 | 4.2 | 3.5 | --- | --- | --- | --- | --- |
| -5 | 86-132 | Bw2 | 0.02 | 0.02 | 0.02 | 0.00 | 0.06 | 5.38 | 5.44 | 1 | 0.27 | 0.05 | 5.1 | 4.3 | 3.8 | --- | --- | --- | --- | --- |
| -6 | 132-203 | B'h | 0.11 | 0.05 | 0.03 | 0.01 | 0.20 | 10.64 | 10.84 | 2 | 0.81 | 0.02 | 5.0 | 4.5 | 4.3 | 0.35 | 0.00 | 0.22 | 0.02 | 0.21 |

See footnotes at end of table.

Table 18.--Chemical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Extractable bases: Ca | Mg | Na | K | Sum | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH: $H_2O$ (1:1) | $CaCl_2$ (0.01M) (1:2) | KCl 1N (1:1) | Pyrophosphate extractable: C | Fe | Al | Citrate-dithionite extractable: Fe | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | ----Milliequivalents/100 grams of soil---- | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Mandarin fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-014-1 | 0-18 | Ap | 0.52 | 0.25 | 0.02 | 0.04 | 0.83 | 5.00 | 5.83 | 14 | 1.24 | 0.08 | 4.5 | 3.2 | 3.2 | --- | --- | --- | --- | --- |
| -2 | 18-38 | E1 | 0.09 | 0.06 | 0.00 | 0.01 | 0.16 | 1.64 | 1.80 | 9 | 0.41 | 0.06 | 4.6 | 3.3 | 3.2 | --- | --- | --- | --- | --- |
| -3 | 38-66 | E2 | 0.06 | 0.02 | 0.00 | 0.00 | 0.08 | 0.12 | 0.20 | 40 | 0.25 | 0.01 | 5.0 | 3.8 | 3.8 | --- | --- | --- | --- | --- |
| -4 | 66-76 | Bh1 | 0.19 | 0.04 | 0.01 | 0.01 | 0.25 | 12.94 | 13.19 | 2 | 1.34 | 0.02 | 4.7 | 3.8 | 3.6 | 0.92 | 0.00 | 0.13 | 0.08 | 0.16 |
| -5 | 76-112 | Bh2 | 0.07 | 0.03 | 0.02 | 0.01 | 0.13 | 12.50 | 12.63 | 1 | 1.27 | 0.02 | 4.9 | 4.1 | 3.8 | 0.79 | 0.00 | 0.17 | 0.07 | 0.16 |
| -6 | 112-203 | C | 0.02 | 0.01 | 0.00 | 0.00 | 0.03 | 0.42 | 0.45 | 7 | 0.22 | 0.01 | 5.2 | 4.8 | 4.7 | --- | --- | --- | --- | --- |
| Mascotte sand:[2] | | | | | | | | | | | | | | | | | | | | |
| S81FL-065-029-1 | 0-20 | Ap | 0.22 | 0.08 | 0.03 | 0.02 | 0.35 | 7.09 | 7.44 | 5 | 1.19 | 0.04 | 4.6 | 3.6 | 3.5 | --- | --- | --- | --- | --- |
| -2 | 20-25 | Bh1 | 0.10 | 0.02 | 0.03 | 0.01 | 0.16 | 11.26 | 11.42 | 1 | 1.38 | 0.03 | 5.0 | 4.1 | 4.2 | 0.65 | 0.01 | 0.23 | 0.04 | 0.14 |
| -3 | 25-41 | Bh2 | 0.04 | 0.02 | 0.01 | 0.00 | 0.07 | 14.31 | 14.38 | 0 | 1.02 | 0.02 | 4.9 | 4.5 | 4.4 | 0.58 | 0.01 | 0.27 | 0.03 | 0.27 |
| -4 | 41-66 | E | 0.03 | 0.01 | 0.01 | 0.00 | 0.05 | 4.48 | 4.53 | 1 | 0.19 | 0.02 | 5.1 | 4.6 | 4.7 | --- | --- | --- | --- | --- |
| -5 | 66-135 | Btg1 | 0.02 | 0.04 | 0.03 | 0.01 | 0.10 | 7.23 | 7.33 | 1 | 0.09 | 0.02 | 4.6 | 4.1 | 4.1 | --- | --- | --- | 0.06 | 0.07 |
| -6 | 135-203 | Btg2 | 0.05 | 0.06 | 0.03 | 0.01 | 0.15 | 7.43 | 7.58 | 2 | 0.04 | 0.02 | 5.1 | 4.0 | 4.1 | --- | --- | --- | 0.08 | 0.05 |
| Meadowbrook sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-020-1 | 0-23 | Ap | 0.35 | 0.09 | 0.00 | 0.01 | 0.45 | 4.50 | 4.95 | 9 | 1.06 | 0.15 | 5.2 | 4.4 | 3.8 | --- | --- | --- | --- | --- |
| -2 | 23-46 | Bw1 | 0.03 | 0.02 | 0.00 | 0.00 | 0.05 | 1.17 | 1.22 | 4 | 0.27 | 0.15 | 6.6 | 5.8 | 4.5 | --- | --- | --- | --- | --- |
| -3 | 46-79 | Bw2 | 0.06 | 0.04 | 0.00 | 0.00 | 0.10 | 1.15 | 1.25 | 8 | 0.36 | 0.15 | 6.7 | 5.7 | 4.3 | --- | --- | --- | --- | --- |
| -4 | 79-147 | E | 0.07 | 0.02 | 0.00 | 0.00 | 0.09 | 0.89 | 0.98 | 9 | 0.14 | 0.16 | 6.9 | 6.1 | 4.8 | --- | --- | --- | --- | --- |
| -5 | 147-203 | Btg | 11.25 | 3.70 | 0.02 | 0.15 | 15.12 | 4.65 | 19.77 | 76 | 0.49 | 0.20 | 7.0 | 6.6 | 6.0 | --- | --- | --- | 0.19 | 0.05 |
| Melvina fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-018-1 | 0-15 | Ap | 0.46 | 0.11 | 0.00 | 0.01 | 0.58 | 4.68 | 5.26 | 12 | 0.98 | 0.16 | 4.6 | 3.8 | 3.4 | --- | --- | --- | --- | --- |
| -2 | 15-71 | E | 0.20 | 0.07 | 0.00 | 0.01 | 0.28 | 2.03 | 2.31 | 12 | 0.67 | 0.16 | 6.5 | 5.9 | 4.4 | --- | --- | --- | --- | --- |
| -3 | 71-81 | Bh1 | 0.12 | 0.06 | 0.00 | 0.00 | 0.18 | 9.40 | 9.58 | 2 | 0.64 | 0.14 | 5.6 | 4.3 | 3.6 | 0.51 | 0.00 | 0.10 | 0.11 | 0.09 |
| -4 | 81-99 | Bh2 | 0.07 | 0.02 | 0.00 | 0.00 | 0.09 | 7.27 | 7.36 | 1 | 0.53 | 0.15 | 6.1 | 4.5 | 3.7 | 0.58 | 0.00 | 0.10 | 0.06 | 0.08 |
| -5 | 99-135 | EB | 0.09 | 0.01 | 0.00 | 0.00 | 0.10 | 2.65 | 2.75 | 4 | 0.31 | 0.15 | 6.7 | 5.6 | 4.5 | --- | --- | --- | --- | --- |
| -6 | 135-170 | Btg1 | 8.50 | 0.29 | 0.00 | 0.09 | 8.88 | 2.85 | 11.73 | 76 | 0.31 | 0.20 | 7.1 | 6.5 | 6.3 | --- | --- | --- | 0.08 | 0.04 |
| -7 | 170-203 | Btg2 | 26.75 | 0.82 | 0.04 | 0.24 | 27.85 | 8.31 | 36.16 | 77 | 0.36 | 0.20 | 7.6 | 6.9 | 6.5 | --- | --- | --- | 0.24 | 0.09 |
| Moriah fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-013-1 | 0-13 | A | 0.41 | 0.16 | 0.00 | 0.01 | 0.58 | 2.10 | 2.68 | 22 | 0.76 | 0.07 | 3.8 | 3.6 | 3.5 | --- | --- | --- | --- | --- |
| -2 | 13-30 | E1 | 0.08 | 0.03 | 0.00 | 0.00 | 0.11 | 0.35 | 0.46 | 24 | 0.28 | 0.05 | 5.0 | 3.9 | 3.8 | --- | --- | --- | --- | --- |
| -3 | 30-79 | E2 | 0.04 | 0.02 | 0.00 | 0.00 | 0.06 | 0.19 | 0.25 | 24 | 0.13 | 0.06 | 5.5 | 4.5 | 4.3 | --- | --- | --- | --- | --- |
| -4 | 79-86 | E3 | 0.08 | 0.04 | 0.00 | 0.00 | 0.12 | 0.29 | 0.41 | 29 | 0.13 | 0.02 | 5.3 | 4.2 | 4.0 | --- | --- | --- | --- | --- |
| -5 | 86-132 | Bt1 | 24.25 | 11.93 | 0.10 | 0.26 | 36.54 | 7.84 | 44.38 | 82 | 0.32 | 0.10 | 6.6 | 6.0 | 5.7 | --- | --- | --- | 0.17 | 0.07 |
| -6 | 132-145 | Bt2 | 24.50 | 12.76 | 0.09 | 1.37 | 38.72 | 5.76 | 44.48 | 87 | 0.30 | 0.13 | 7.1 | 6.5 | 6.2 | --- | --- | --- | 0.17 | 0.07 |

See footnotes at end of table.

Table 18.--Chemical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Extractable bases: Ca | Mg | Na | K | Sum | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH: $H_2O$ (1:1) | $CaCl_2$ (0.01M) (1:2) | KCl (1N) (1:1) | Pyrophosphate extractable: C | Fe | Al | Citrate-dithionite extractable: Fe | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | ----Milliequivalents/100 grams of soil----- | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Nutall fine sand:[2] | | | | | | | | | | | | | | | | | | | | |
| S82FL-065-037-1 | 0-10 | A | 6.16 | 0.60 | 0.08 | 0.08 | 6.92 | 14.25 | 21.17 | 33 | 3.58 | 0.06 | 4.7 | 4.1 | 3.9 | --- | --- | --- | --- | --- |
| -2 | 10-23 | A/E | 2.50 | 0.04 | 0.03 | 0.01 | 2.58 | 1.78 | 4.36 | 59 | 0.86 | 0.06 | 6.2 | 5.1 | 5.2 | --- | --- | --- | --- | --- |
| -3 | 23-33 | E1 | 0.52 | 0.02 | 0.03 | 0.01 | 0.58 | 0.53 | 1.11 | 52 | 0.06 | 0.06 | 6.8 | 5.8 | 5.7 | --- | --- | --- | --- | --- |
| -4 | 33-43 | E2 | 0.63 | 0.02 | 0.02 | 0.00 | 0.67 | 0.39 | 1.06 | 63 | 0.05 | 0.05 | 7.3 | 6.5 | 6.3 | --- | --- | --- | --- | --- |
| -5 | 43-76 | Btg | 24.37 | 0.24 | 0.10 | 0.25 | 24.96 | 5.20 | 30.16 | 83 | 0.12 | 0.06 | 7.7 | 6.8 | 6.5 | --- | --- | --- | 0.31 | 0.05 |
| Ocilla sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-015-1 | 0-15 | A | 0.40 | 0.10 | 0.00 | 0.01 | 0.51 | 3.14 | 3.65 | 14 | 1.10 | 0.02 | 5.3 | 4.4 | 4.1 | --- | --- | --- | --- | --- |
| -2 | 15-58 | E | 0.13 | 0.04 | 0.00 | 0.00 | 0.17 | 3.02 | 3.19 | 5 | 0.46 | 0.02 | 5.5 | 4.7 | 4.6 | --- | --- | --- | --- | --- |
| -3 | 58-71 | Bt | 0.18 | 0.07 | 0.00 | 0.01 | 0.26 | 3.40 | 3.66 | 7 | 0.28 | 0.03 | 4.8 | 4.1 | 4.2 | --- | --- | --- | 0.07 | 0.06 |
| -4 | 71-119 | Btg1 | 0.16 | 0.11 | 0.00 | 0.00 | 0.27 | 3.94 | 4.21 | 6 | 0.16 | 0.03 | 4.8 | 4.1 | 4.1 | --- | 0.24 | 0.08 | --- | --- |
| -5 | 119-175 | Btg2 | 0.03 | 0.04 | 0.01 | 0.00 | 0.08 | 3.81 | 3.89 | 2 | 0.05 | 0.02 | 4.7 | 4.0 | 4.0 | --- | --- | --- | 0.14 | 0.04 |
| -6 | 175-203 | Cg | 0.02 | 0.02 | 0.00 | 0.00 | 0.04 | 2.99 | 3.03 | 1 | 0.14 | 0.03 | 4.8 | 4.1 | 4.1 | --- | --- | --- | --- | --- |
| Ortega fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-010-1 | 0-13 | Ap | 0.51 | 0.08 | 0.02 | 0.01 | 0.62 | 1.11 | 1.73 | 36 | 0.57 | 0.02 | 5.0 | 4.2 | 4.2 | --- | --- | --- | --- | --- |
| -2 | 13-51 | C1 | 0.03 | 0.01 | 0.02 | 0.00 | 0.06 | 1.23 | 1.79 | 5 | 0.19 | 0.02 | 4.8 | 4.5 | 4.7 | --- | --- | --- | --- | --- |
| -3 | 51-107 | C2 | 0.02 | 0.01 | 0.02 | 0.00 | 0.05 | 1.52 | 1.57 | 3 | 0.20 | 0.03 | 4.5 | 4.5 | 4.8 | --- | --- | --- | --- | --- |
| -4 | 107-155 | C3 | 0.03 | 0.01 | 0.02 | 0.00 | 0.06 | 0.01 | 0.07 | 86 | 0.04 | 0.02 | 4.7 | 4.5 | 4.8 | --- | --- | --- | --- | --- |
| -5 | 155-203 | C4 | 0.01 | 0.00 | 0.02 | 0.00 | 0.03 | 0.29 | 0.32 | 9 | 0.04 | 0.03 | 4.6 | 4.6 | 4.8 | --- | --- | --- | --- | --- |
| Osier fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-007-1 | 0-13 | Ap | 0.41 | 0.10 | 0.02 | 0.04 | 0.57 | 7.21 | 7.78 | 7 | 1.39 | 0.03 | 4.8 | 4.2 | 4.0 | --- | --- | --- | --- | --- |
| -2 | 13-46 | C1 | 0.06 | 0.01 | 0.01 | 0.01 | 0.09 | 4.97 | 5.06 | 2 | 0.60 | 0.02 | 4.8 | 4.4 | 4.5 | --- | --- | --- | --- | --- |
| -3 | 46-64 | C2 | 0.04 | 0.01 | 0.00 | 0.00 | 0.05 | 2.18 | 2.23 | 2 | 0.24 | 0.01 | 4.9 | 4.5 | 4.7 | --- | --- | --- | --- | --- |
| -4 | 64-127 | C3 | 0.02 | 0.01 | 0.00 | 0.00 | 0.03 | 1.11 | 1.14 | 3 | 0.12 | 0.01 | 4.8 | 4.5 | 4.7 | --- | --- | --- | --- | --- |
| -5 | 127-203 | C4 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 | 0.16 | 0.20 | 20 | 0.06 | 0.01 | 5.1 | 4.7 | 4.8 | --- | --- | --- | --- | --- |
| Otela fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-016-1 | 0-18 | Ap | 1.15 | 0.41 | 0.00 | 0.06 | 1.62 | 5.04 | 6.66 | 24 | 1.53 | 0.07 | 5.7 | 4.8 | 4.5 | --- | --- | --- | --- | --- |
| -2 | 18-71 | E1 | 0.09 | 0.07 | 0.00 | 0.00 | 0.16 | 2.16 | 2.32 | 7 | 0.26 | 0.03 | 4.6 | 4.5 | 0.1 | --- | --- | --- | --- | --- |
| -3 | 71-119 | E2 | 0.07 | 0.06 | 0.00 | 0.00 | 0.13 | 0.79 | 0.92 | 14 | 0.16 | 0.01 | 5.4 | 4.5 | 4.5 | --- | --- | --- | --- | --- |
| -4 | 119-137 | Bt1 | 1.40 | 0.82 | 0.01 | 0.03 | 2.26 | 5.08 | 7.34 | 31 | 0.17 | 0.01 | 5.2 | 4.3 | 4.2 | --- | --- | --- | 1.64 | 0.08 |
| -5 | 137-160 | Bt1 | 2.20 | 0.99 | 0.02 | 0.05 | 3.26 | 7.11 | 10.37 | 31 | 0.08 | 0.02 | 5.2 | 4.2 | 4.1 | --- | --- | --- | 2.23 | 0.26 |
| -6 | 160-203 | Bt2 | 5.00 | 2.76 | 0.06 | 0.12 | 7.94 | 14.06 | 22.00 | 36 | 0.18 | 0.02 | 5.2 | 4.0 | 3.9 | --- | --- | --- | 3.33 | 0.29 |
| Pamlico muck:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-017-1 | 0-23 | Oe&Oa1 | 2.65 | 1.40 | 0.36 | 0.49 | 4.90 | 186.29 | 191.19 | 3 | 48.39 | 0.12 | 3.7 | 2.9 | 2.8 | --- | --- | --- | --- | --- |
| -2 | 23-56 | Oa2 | 0.61 | 0.14 | 0.13 | 0.04 | 0.92 | 154.24 | 155.16 | 1 | 42.52 | 0.11 | 3.7 | 2.9 | 2.9 | --- | --- | --- | --- | --- |
| -3 | 56-64 | 2C1 | 0.09 | 0.03 | 0.01 | 0.00 | 0.13 | 8.16 | 8.29 | 2 | 2.34 | 0.04 | 4.0 | 3.3 | 3.3 | --- | --- | --- | --- | --- |
| -4 | 64-152 | 2C2 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 | 3.08 | 3.12 | 1 | 1.26 | 0.02 | 4.4 | 3.7 | 3.6 | --- | --- | --- | --- | --- |

See footnotes at end of table.

Table 18.--Chemical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Extractable bases: Ca | Mg | Na | K | Sum | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH: $H_2O$ (1:1) | $CaCl_2$ (0.01M) (1:2) | KCl 1N (1:1) | Pyrophosphate extractable: C | Fe | Al | Citrate-dithionite extractable: Fe | Al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cm | | ----Milliequivalents/100 grams of soil----- | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Resota sand:[1] | | | | | | | | | | | | | | | | | | | | |
| S90FL-029-015-1 | 0-8 | A | 0.07 | 0.03 | 0.00 | 0.00 | 0.10 | 0.70 | 0.80 | 13 | 0.74 | 1.49 | 4.9 | 3.8 | 3.5 | --- | --- | --- | --- | --- |
| -2 | 8-33 | E | 0.01 | 0.01 | 0.00 | 0.00 | 0.02 | 0.37 | 0.39 | 5 | 0.08 | 1.52 | 5.4 | 4.4 | 4.3 | --- | --- | --- | --- | --- |
| -3 | 33-48 | Bw1 | 0.02 | 0.02 | 0.00 | 0.00 | 0.04 | 6.36 | 6.40 | 1 | 0.54 | 1.38 | 5.0 | 4.4 | 4.3 | --- | --- | --- | --- | --- |
| -4 | 48-94 | Bw2 | 0.02 | 0.02 | 0.00 | 0.00 | 0.04 | 1.38 | 1.42 | 3 | 0.13 | 1.48 | 4.9 | 4.7 | 4.5 | --- | --- | --- | --- | --- |
| -5 | 94-140 | Bw3 | 0.03 | 0.01 | 0.00 | 0.00 | 0.04 | 0.38 | 0.42 | 10 | 0.08 | 1.56 | 5.4 | 4.7 | 4.5 | --- | --- | --- | --- | --- |
| -6 | 140-203 | C | 0.02 | 0.02 | 0.00 | 0.00 | 0.04 | 0.05 | 0.09 | 44 | 0.05 | 1.57 | 5.4 | 4.6 | 4.6 | --- | --- | --- | --- | --- |
| Ridgewood fine sand:[5] | | | | | | | | | | | | | | | | | | | | |
| S88FL-123-011-1 | 0-18 | Ap | 0.38 | 0.08 | 0.02 | 0.01 | 0.49 | 1.85 | 2.34 | 21 | 1.08 | 0.02 | 4.7 | 4.1 | 4.1 | --- | --- | --- | --- | --- |
| -2 | 18-41 | C1 | 0.06 | 0.02 | 0.04 | 0.01 | 0.13 | 1.52 | 1.65 | 8 | 0.25 | 0.03 | 4.8 | 4.6 | 4.7 | --- | --- | --- | --- | --- |
| -3 | 41-91 | C2 | 0.03 | 0.02 | 0.02 | 0.01 | 0.08 | 0.67 | 0.75 | 11 | 0.10 | 0.02 | 4.6 | 4.5 | 4.6 | --- | --- | --- | --- | --- |
| -4 | 91-135 | C3 | 0.01 | 0.00 | 0.01 | 0.00 | 0.02 | 0.20 | 0.22 | 9 | 0.06 | 0.02 | 4.6 | 4.6 | 4.7 | --- | --- | --- | --- | --- |
| -5 | 135-203 | C4 | 0.06 | 0.00 | 0.00 | 0.00 | 0.06 | 0.23 | 0.29 | 21 | 0.04 | 0.02 | 4.8 | 4.7 | 4.8 | --- | --- | --- | --- | --- |
| Sapelo fine sand:[3] | | | | | | | | | | | | | | | | | | | | |
| S89FL-067-007-1 | 0-15 | Ap | 0.21 | 0.15 | 0.02 | 0.03 | 0.41 | 5.23 | 5.64 | 7 | 1.13 | 0.04 | 4.3 | 3.4 | 3.4 | --- | --- | --- | --- | --- |
| -2 | 15-33 | E1 | 0.07 | 0.07 | 0.01 | 0.02 | 0.17 | 4.10 | 4.27 | 4 | 1.12 | 0.03 | 4.3 | 3.4 | 2.9 | --- | --- | --- | --- | --- |
| -3 | 33-71 | E2 | 0.02 | 0.02 | 0.00 | 0.00 | 0.04 | 0.46 | 0.50 | 8 | 0.47 | 0.01 | 5.5 | 4.2 | 3.8 | --- | --- | --- | --- | --- |
| -4 | 71-86 | Bh1 | 0.04 | 0.02 | 0.01 | 0.01 | 0.07 | 11.25 | 11.32 | 1 | 1.41 | 0.02 | 4.7 | 3.8 | 3.3 | 0.75 | 0.00 | 0.15 | 0.04 | 0.10 |
| -5 | 86-114 | Bh2 | 0.02 | 0.01 | 0.00 | 0.00 | 0.03 | 5.40 | 5.43 | 1 | 0.34 | 0.01 | 5.3 | 4.6 | 3.8 | --- | --- | --- | --- | --- |
| -6 | 114-152 | E' | 0.05 | 0.02 | 0.00 | 0.00 | 0.07 | 0.76 | 0.83 | 8 | 0.16 | 0.01 | 5.7 | 4.7 | 4.4 | --- | --- | --- | --- | --- |
| -7 | 152-185 | Btg | 0.72 | 0.49 | 0.02 | 0.03 | 1.26 | 7.89 | 9.15 | 14 | 0.18 | 0.01 | 5.5 | 4.2 | 4.1 | --- | --- | --- | 0.05 | 0.11 |
| -8 | 185-203 | BCg | 1.60 | 0.82 | 0.02 | 0.02 | 2.44 | 3.38 | 5.82 | 42 | 0.11 | 0.01 | 5.6 | 4.4 | 4.1 | --- | --- | --- | --- | --- |
| Tennille fine sand:[1] | | | | | | | | | | | | | | | | | | | | |
| S90FL-029-018-1 | 0-15 | A | 14.50 | 1.03 | 0.08 | 0.04 | 15.65 | 5.14 | 20.79 | 75 | 3.48 | 0.33 | 6.5 | 6.3 | 6.1 | --- | --- | --- | --- | --- |
| -2 | 15-35 | C | 2.72 | 0.14 | 0.00 | 0.00 | 2.86 | 0.10 | 2.96 | 97 | 0.23 | 0.08 | 6.9 | 6.4 | 6.3 | --- | --- | --- | --- | --- |
| Tooles fine sand:[1] | | | | | | | | | | | | | | | | | | | | |
| S90FL-029-006-1 | 0-20 | Ap | 0.70 | 0.04 | 0.00 | 0.00 | 0.74 | 1.75 | 2.49 | 30 | 0.46 | 0.01 | 5.2 | 4.6 | 4.4 | --- | --- | --- | --- | --- |
| -2 | 20-58 | Bw1 | 0.46 | 0.03 | 0.00 | 0.00 | 0.49 | 0.64 | 1.13 | 43 | 0.20 | 0.01 | 5.6 | 5.1 | 5.0 | --- | --- | --- | --- | --- |
| -3 | 58-89 | Bw2 | 0.60 | 0.02 | 0.00 | 0.00 | 0.62 | 0.30 | 0.92 | 67 | 0.15 | 0.01 | 5.5 | 5.6 | 5.4 | --- | --- | --- | --- | --- |
| -4 | 89-117 | Btg | 24.00 | 0.24 | 0.02 | 0.11 | 24.37 | 2.64 | 27.01 | 90 | 0.18 | 0.06 | 6.4 | 6.3 | 6.2 | --- | --- | --- | 1.68 | 0.26 |

See footnotes at end of table.

Table 18.--Chemical Analyses of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Extractable bases | | | | | Extractable acidity | Sum of cations | Base saturation | Organic carbon | Electrical conductivity | pH | | | Pyrophosphate extractable | | | Citrate-dithionite extractable | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ca | Mg | Na | K | Sum | | | | | | $H_2O$ (1:1) | $CaCl_2$ 0.01M (1:2) | KCl 1N (1:1) | C | Fe | Al | Fe | Al |
| | cm | | ----Milliequivalents/100 grams of soil----- | | | | | | | Pct | Pct | mmhos/cm | | | | Pct | Pct | Pct | Pct | Pct |
| Wekiva fine sand:[1] | | | | | | | | | | | | | | | | | | | | |
| S90FL-029-010-1 | 0-15 | Ap | 5.00 | 0.99 | 0.05 | 0.07 | 6.11 | 3.42 | 9.53 | 64 | 2.68 | 0.07 | 5.9 | 5.8 | 5.7 | --- | --- | --- | --- | --- |
| -2 | 15-36 | Bw | 2.18 | 0.15 | 0.10 | 0.01 | 2.44 | 0.14 | 2.58 | 95 | 0.25 | 0.05 | 6.1 | 5.9 | 5.9 | --- | --- | --- | --- | --- |
| -3 | 36-53 | Bt | 9.00 | 0.41 | 0.03 | 0.04 | 9.48 | 0.82 | 10.30 | 92 | 0.34 | 0.04 | 6.3 | 6.2 | 6.1 | --- | --- | --- | 1.27 | 0.29 |

[1] The soil is the typical pedon as sampled in Dixie County, Florida.
[2] The soil is the typical pedon as sampled in Jefferson County, Florida.
[3] The soil is the typical pedon as sampled in Lafayette County, Florida.
[4] The soil is the typical pedon as sampled in Madison County, Florida.
[5] The soil is the typical pedon as sampled in Taylor County, Florida.
[6] This soil is not the typical pedon for the series, however, it is the typical pedon for Chaires fine sand, limestone substratum, as sampled in Taylor County. Location is SW1/4SE1/4 sec. 28, T. 7 S., R. 9 E.

Table 19.--Clay Mineralogy of Selected Soils

(Each of the soils is the typical pedon for the series in this survey area. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology.")

| Soil name and sample number | Depth | Horizon | Clay minerals | | | | |
|---|---|---|---|---|---|---|---|
| | | | Montmorillonite | 14-angstrom intergrade | Kaolinite | Quartz | Gibbsite |
| | cm | | Pct | Pct | Pct | Pct | Pct |
| Albany sand:[4] | | | | | | | |
| S84FL-040-012-1 | 0-25 | Ap | 0 | 16 | 18 | 66 | 0 |
| -5 | 127-145 | Bt | 0 | 9 | 6 | 5 | 0 |
| -7 | 175-203 | Btg2 | 0 | 5 | 91 | 4 | 0 |
| Chaires fine sand:[5] | | | | | | | |
| S88FL-123-005-1 | 0-15 | Ap | 0 | 0 | 15 | 85 | 0 |
| -3 | 51-66 | Bh1 | 21 | 17 | 35 | 27 | 0 |
| -6 | 132-203 | Btg | 17 | 14 | 59 | 10 | 0 |
| Chaires fine sand, limestone substratum:[6] | | | | | | | |
| S88FL-123-008-1 | 0-15 | Ap | 0 | 0 | 0 | 100 | 0 |
| -3 | 64-74 | Bh1 | 19 | 17 | 22 | 42 | 0 |
| -6 | 112-140 | Btg | 0 | 31 | 55 | 14 | 0 |
| Chipley sand:[5] | | | | | | | |
| S88FL-123-009-1 | 0-23 | Ap | 0 | 41 | 23 | 36 | 0 |
| -3 | 51-122 | C2 | 13 | 43 | 31 | 13 | 0 |
| -5 | 175-203 | C4 | 0 | 45 | 33 | 22 | 0 |
| Hurricane fine sand:[5] | | | | | | | |
| S88FL-123-012-1 | 0-20 | Ap | 0 | 39 | 17 | 44 | 0 |
| -4 | 81-122 | E3 | 0 | 48 | 19 | 33 | 0 |
| -7 | 175-203 | Bh | 0 | 37 | 17 | 46 | 0 |
| Leon fine sand:[5] | | | | | | | |
| S88FL-123-006-1 | 0-15 | Ap | 0 | 0 | 18 | 82 | 0 |
| -4 | 64-76 | Bh1 | 13 | 16 | 20 | 51 | 0 |
| -7 | 142-203 | C2 | 0 | 37 | 17 | 46 | 0 |
| Lutterloh fine sand:[5] | | | | | | | |
| S88FL-123-003-1 | 0-20 | A | 0 | 43 | 20 | 37 | 0 |
| -3 | 49-91 | E2 | 0 | 33 | 18 | 49 | 0 |
| -5 | 130-162 | Bt | 0 | 43 | 41 | 16 | 0 |
| Lynn Haven mucky fine sand:[3] | | | | | | | |
| S89FL-067-004-1 | 0-33 | Ap | 21 | 0 | 10 | 69 | 0 |
| -3 | 48-69 | Bh | 22 | 27 | 17 | 34 | 0 |
| -6 | 132-203 | B'h | 0 | 24 | 15 | 61 | 0 |
| Mascotte sand:[2] | | | | | | | |
| S81FL-065-029-1 | 0-20 | Ap | 41 | 0 | 39 | 20 | 0 |
| -2 | 20-25 | Bh1 | 0 | 35 | 40 | 25 | 0 |
| -5 | 66-135 | Btg1 | 0 | 17 | 77 | 6 | 0 |
| Nutall fine sand:[2] | | | | | | | |
| S82FL-065-037-1 | 0-10 | Ap | 0 | 25 | 10 | 65 | 0 |
| -5 | 43-76 | Btg | 84 | 10 | 1 | 5 | 0 |

See footnotes at end of table.

Table 19.--Clay Mineralogy of Selected Soils--Continued

| Soil name and sample number | Depth | Horizon | Clay minerals | | | | |
|---|---|---|---|---|---|---|---|
| | | | Montmorillonite | 14-angstrom intergrade | Kaolinite | Quartz | Gibbsite |
| | cm | | Pct | Pct | Pct | Pct | Pct |
| Ortega fine sand:[5] | | | | | | | |
| S88FL-123-015-1 | 0-13 | Ap | 28 | 37 | 15 | 20 | 0 |
| -3 | 51-107 | C2 | 15 | 49 | 13 | 23 | 0 |
| -5 | 155-203 | C4 | 26 | 36 | 10 | 28 | 0 |
| Osier fine sand:[5] | | | | | | | |
| S88FL-123-007-1 | 0-13 | Ap | 0 | 43 | 15 | 42 | 0 |
| -3 | 46-64 | C2 | 0 | 53 | 23 | 24 | 0 |
| -5 | 127-203 | C4 | 0 | 46 | 14 | 40 | 0 |
| Plummer fine sand:[3] | | | | | | | |
| S90FL-067-013-1 | 0-18 | Ap | 4 | 26 | 20 | 50 | 0 |
| -5 | 140-203 | Btg | 26 | 28 | 31 | 15 | 0 |
| Ridgewood fine sand:[5] | | | | | | | |
| S88FL-123-011-1 | 0-18 | Ap | 0 | 56 | 16 | 28 | 0 |
| -3 | 41-91 | C2 | 12 | 54 | 18 | 16 | 0 |
| -5 | 135-203 | C4 | 18 | 41 | 8 | 33 | 0 |
| Sapelo fine sand:[3] | | | | | | | |
| S89FL-067-007-1 | 0-15 | Ap | 0 | 0 | 20 | 80 | 0 |
| -4 | 71-86 | Bh1 | 0 | 36 | 30 | 34 | 0 |
| -7 | 152-185 | Btg | 0 | 24 | 69 | 7 | 0 |
| -8 | 185-203 | BCg | 0 | 22 | 71 | 7 | 0 |
| Tooles fine sand:[1] | | | | | | | |
| S90FL-029-006-1 | 0-20 | Ap | 29 | 21 | 19 | 17 | 14 |
| -2 | 20-58 | Bw1 | 22 | 30 | 12 | 15 | 20 |
| -4 | 89-117 | Btg | 49 | 18 | 17 | 7 | 9 |

[1] The soil is the typical pedon as sampled in Jefferson County, Florida.
[2] The soil is the typical pedon as sampled in Lafayette County, Florida.
[3] The soil is the typical pedon as sampled in Madison County, Florida.
[4] The soil is the typical pedon as sampled in Taylor County, Florida.
[5] This soil is not the typical pedon for the series, however, it is the typical pedon for Chaires fine sand, limestone substratum, as sampled in Taylor County, Florida. Location is SW1/4SE 1/4 sec. 28, T. 7 S., R. 9 E.

Table 20.--Engineering Index Test Data

(Tests performed by the Florida Department of Transportation (FDOT) in cooperation with the U.S. Bureau of Public Roads, in accordance with standard procedures of the American Association of State Highway and Transportation Officials. See the section "Soil Series and Their Morphology" for location of pedons sampled. NP means nonplastic.)

| Soil name, report number, horizon, and depth in inches | FDOT Report Number | Classification | | Mechanical analysis | | | | | | | | Liquid limit | Plasticity index | Moisture density | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Percentage passing sieve-- | | | | Percentage smaller than-- | | | | | | Maximum dry density | Optimum moisture |
| | | AASHTO | Unified | No. 4 | No. 10 | No. 40 | No. 200 | .05 mm | .02 mm | .005 mm | .002 mm | | | | |
| | | | | | | | | | | | | Pct | | Lb/ft$^3$ | Pct |
| Albany sand:[4] | | | | | | | | | | | | | | | |
| (S84FL-040-012) | | | | | | | | | | | | | | | |
| E3-------- 37-50 | 19 | A-2-4 | SM | 100 | 100 | 87 | 13 | 11 | 8 | 4 | 4 | --- | NP | 113.4 | 10.6 |
| Btg1------ 57-69 | 20 | A-7-6 | SC | 100 | 96 | 84 | 46 | 45 | 44 | 41 | 39 | 43.0 | 23.0 | 109.0 | 16.7 |
| Chaires fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-05) | | | | | | | | | | | | | | | |
| E--------- 6-20 | 5 | A-3 | SP | 100 | 100 | 87 | 4 | 2 | 1 | 0 | 0 | NP | NP | 104.1 | 13.1 |
| Chaires fine sand, limestone substratum:[6] | | | | | | | | | | | | | | | |
| (S88FL-123-008) | | | | | | | | | | | | | | | |
| E--------- 6-25 | 8 | A-3 | SP-SM | 100 | 100 | 81 | 6 | 3 | 1 | 0 | 0 | NP | NP | 105.3 | 12.1 |
| Chiefland sand:[1] | | | | | | | | | | | | | | | |
| (S90FL-029-017) | | | | | | | | | | | | | | | |
| Bt-------- 26-35 | 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 116.0 | 13.0 |
| Chipley fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-019) | | | | | | | | | | | | | | | |
| C2-------- 25-48 | 9 | A-3 | SP-SM | 100 | 100 | 82 | 5 | 2 | 2 | 0 | 0 | NP | NP | 112.5 | 10.0 |
| Hurricane fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-012) | | | | | | | | | | | | | | | |
| E1-------- 48-63 | 12 | A-3 | SP | 100 | 100 | 97 | 2 | 0 | 0 | 0 | 0 | NP | NP | 101.7 | 14.9 |
| Leon fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-006) | | | | | | | | | | | | | | | |
| E2-------- 11-25 | 6 | A-3 | SP | 100 | 100 | 88 | 4 | 4 | 4 | 3 | 2 | NP | NP | 105.2 | 13.1 |
| Lutterloh fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-003) | | | | | | | | | | | | | | | |
| E2-------- 19-36 | 3 | A-3 | SP | 100 | 100 | 95 | 4 | 3 | 2 | 1 | 1 | NP | NP | 106.3 | 11.7 |
| Lynn Haven mucky fine sand:[3] | | | | | | | | | | | | | | | |
| (S89FL-067-004) | | | | | | | | | | | | | | | |
| E'1------- 45-60 | --- | A-3 | SP-SM | 100 | 100 | 98 | 10 | 8 | 6 | 5 | 2 | -- | NP | 109.1 | 10.3 |
| Mandarin fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-014) | | | | | | | | | | | | | | | |
| E2-------- 15-26 | 15 | A-2-4 | SP | 100 | 100 | 92 | 4 | --- | --- | --- | --- | NP | NP | 102.9 | 14.4 |
| Meadowbrook sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-020) | | | | | | | | | | | | | | | |
| Bw2------- 18-31 | 24 | A-3 | SP-SM | 100 | 100 | 91 | 7 | --- | --- | --- | --- | NP | NP | 108.5 | 11.4 |
| Btg------- 58-80 | 25 | A-2-6 | SC | 100 | 100 | 94 | 33 | --- | --- | --- | --- | 32 | 20 | 108.1 | 13.9 |
| Melvina fine sand:[5] | | | | | | | | | | | | | | | |
| (S88FL-123-018) | | | | | | | | | | | | | | | |
| E--------- 6-28 | 20 | A-3 | SP-SM | 100 | 100 | 90 | 7 | --- | --- | --- | --- | NP | NP | 103.2 | 14.0 |
| Btg1------ 53-67 | 21 | A-2-4 | SC | 100 | 100 | 93 | 23 | --- | --- | --- | --- | NP | NP | 112.4 | 13.7 |

See footnotes at the end of table.

Table 20.--Engineering Index Test Data--Continued

| Soil name, report number, horizon, and depth in inches | FDOT Report Number | Classification | | Mechanical analysis: Percentage passing sieve-- No. 4 | No. 10 | No. 40 | No. 200 | Percentage smaller than-- .05 mm | .02 mm | .005 mm | .002 mm | Liquid limit | Plasticity index | Moisture density: Maximum dry density | Optimum moisture |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AASHTO | Unified | | | | | | | | | Pct | | Lb/ft$^3$ | Pct |
| Moriah fine sand:[5] (S88FL-123-013) | | | | | | | | | | | | | | | |
| E2-------- 9-31 | 13 | A-3 | SP | 100 | 96 | 92 | 3 | --- | --- | --- | --- | NP | NP | 100.3 | 15.4 |
| Bt1------- 34-52 | 14 | A-2-6 | SC | 100 | 99 | 89 | 33 | --- | --- | --- | --- | 38 | 20 | 99.5 | 13.4 |
| Nutall fine sand:[2] (S82FL-065-037) | | | | | | | | | | | | | | | |
| Btg------- 17-30 | 46 | A-2-6 | SC | 100 | 100 | 99 | 31 | 30 | 26 | 25 | 23 | 35 | 19 | 108.8 | 14.5 |
| Ocilla fine sand:[5] (S88FL-123-015) | | | | | | | | | | | | | | | |
| E--------- 6-23 | 16 | A-2-4 | SM | 100 | 96 | 89 | 16 | --- | --- | --- | --- | NP | NP | 114.0 | 8.9 |
| Cg-------- 68-80 | 17 | A-2-4 | SM | 100 | 100 | 94 | 27 | --- | --- | --- | --- | NP | NP | 117.7 | 12.9 |
| Ortega fine sand:[5] (S88FL-123-010) | | | | | | | | | | | | | | | |
| C2-------- 20-42 | 10 | A-3 | SP | 100 | 100 | 92 | 2 | 0 | 0 | 0 | 0 | NP | NP | 104.0 | 11.9 |
| Osier fine sand:[5] (S88FL-123-007) | | | | | | | | | | | | | | | |
| C3-------- 25-50 | 7 | A-3 | SP | 100 | 100 | 90 | 6 | 2 | 2 | 1 | 1 | NP | NP | 109.3 | 10.9 |
| Otela fine sand:[5] (S88FL-123-016) | | | | | | | | | | | | | | | |
| E1-------- 7-28 | 18 | A-2-4 | SM | 100 | 100 | 97 | 18 | --- | --- | --- | --- | NP | NP | 111.8 | 10.3 |
| Pamlico muck:[5] (S88FL-123-017) | | | | | | | | | | | | | | | |
| Cg2------- 25-60 | 19 | A-3 | SM | 100 | 100 | 97 | 18 | --- | --- | --- | --- | NP | NP | 106.2 | 11.3 |
| Plummer fine sand:[3] (S90FL-067-013) | | | | | | | | | | | | | | | |
| Btg------- 55-80 | --- | A-2-4 (0) | SM | 100 | 96 | 91 | 24 | 21 | 18 | 15 | 15 | --- | NP | 118.3 | 12.3 |
| Resota fine sand:[1] (S90FL-029-015) | | | | | | | | | | | | | | | |
| Bw2------- 19-37 | 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | NP | NP | 107.0 | 12.0 |
| Ridgewood fine sand:[5] (S88FL-123-011) | | | | | | | | | | | | | | | |
| C3-------- 36-53 | 11 | A-3 | SP | 100 | 100 | 98 | 2 | 1 | 0 | 0 | 0 | NP | NP | 102.1 | 15.3 |
| Tooles fine sand:[1] (S90FL-029-006) | | | | | | | | | | | | | | | |
| Btg------- 36-46 | 8 | A-2-4 | SM | 100 | 100 | 92 | 22 | 21 | 19 | 16 | 15 | 21 | 5 | 116.2 | 13.4 |
| Wekiva fine sand:[1] (S90FL-029-010) | | | | | | | | | | | | | | | |
| Bt-------- 14-21 | 14 | A-2-4 | SM | 100 | 100 | 86 | 22 | 19 | 16 | 14 | 13 | NP | NP | 121.5 | 11.5 |

[1] The soil is the typical pedon as sampled in Dixie County, Florida.
[2] The soil is the typical pedon as sampled in Jefferson County, Florida.
[3] The soil is the typical pedon as sampled in Lafayette County, Florida.
[4] The soil is the typical pedon as sampled in Madison County, Florida.
[5] The soil is the typical pedon as sampled in Taylor County, Florida.
[6] This soil is not the typical pedon for the series, however, it is the typical pedon for Chaires fine sand, limestone substratum, as sampled in Taylor County, Florida. Location is 7.8 miles north of State Highway 361 and 3.5 miles west of U.S. Highway 19 in SW1/4SE1/4 sec. 28, T. 7 S., R. 9. E.

Table 21.--Classification of the Soils

| Soil name | Family or higher taxonomic class |
|---|---|
| Albany | Loamy, siliceous, subactive, thermic Grossarenic Paleudults |
| Arents | Arents |
| Bayvi | Sandy, siliceous, thermic Cumulic Endoaquolls |
| Bodiford | Loamy, siliceous, superactive, thermic Arenic Endoaqualfs |
| Boulogne | Sandy, siliceous, thermic, Typic Alaquods |
| Bushnell | Fine, mixed, superactive, thermic Albaquic Hapludalfs |
| Chaires | Sandy, siliceous, thermic Alfic Alaquods |
| Chiefland | Loamy, siliceous, active, thermic Arenic Hapludalfs |
| Chipley | Thermic, coated Aquic Quartzipsamments |
| Clara | Siliceous, thermic Spodic Psammaquents |
| Croatan | Loamy, siliceous, dysic, thermic Terric Medisaprists |
| Dorovan | Dysic, thermic Typic Medisaprists |
| Eunola | Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults |
| Evergreen | Sandy, siliceous, thermic Histic Alaquods |
| Goldhead | Loamy, siliceous, active, thermic Arenic Endoaqualfs |
| Hurricane | Sandy, siliceous, thermic Oxyaquic Alorthods |
| Kershaw | Thermic, uncoated Typic Quartzipsamments |
| Leon | Sandy, siliceous, thermic Aeric Alaquods |
| Lutterloh | Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs |
| Lynn Haven | Sandy, siliceous, thermic Typic Alaquods |
| Mandarin | Sandy, siliceous, thermic Oxyaquic Alorthods |
| Mascotte | Sandy, siliceous, thermic Ultic Alaquods |
| Matmon | Loamy, siliceous, active, thermic, shallow Aquic Hapludalfs |
| *Maurepas | Euic, thermic Typic Medisaprists |
| Meadowbrook | Loamy, siliceous, subactive, thermic Grossarenic Endoaqualfs |
| Melvina | Sandy, siliceous, thermic Oxyaquic Alorthods |
| Moriah | Loamy, siliceous, superactive, thermic Aquic Arenic Hapludalfs |
| Nutall | Fine-loamy, siliceous, superactive, thermic Mollic Albaqualfs |
| Ocilla | Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults |
| Ortega | Thermic, uncoated Typic Quartzipsamments |
| Osier | Siliceous, thermic Typic Psammaquents |
| Otela | Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs |
| Ousley | Thermic, uncoated Aquic Quartzipsamments |
| Pamlico | Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Medisaprists |
| Plummer | Loamy, siliceous, subactive, thermic Grossarenic Paleaquults |
| Pottsburg | Sandy, siliceous, thermic Grossarenic Alaquods |
| Resota | Thermic, uncoated Spodic Quartzipsamments |
| Ridgewood | Thermic, uncoated Aquic Quartzipsamments |
| Sapelo | Sandy, siliceous, thermic Ultic Alaquods |
| Seaboard | Thermic, uncoated Lithic Quartzipsamments |
| Starke | Loamy, siliceous, semiactive, thermic Grossarenic Paleaquults |
| Steinhatchee | Sandy, siliceous, thermic Alfic Alaquods |
| Surrency | Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults |
| Tennille | Siliceous, thermic Lithic Psammaquents |
| Tooles | Loamy, siliceous, superactive, thermic Arenic Albaqualfs |
| Wekiva | Loamy, siliceous, active, thermic, shallow Aeric Endoaqualfs |
| Wesconnett | Sandy, siliceous, thermic Typic Alaquods |
| Yellowjacket | Sandy or sandy-skeletal, siliceous, euic, thermic Terric Medisaprists |

* The soil is a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.

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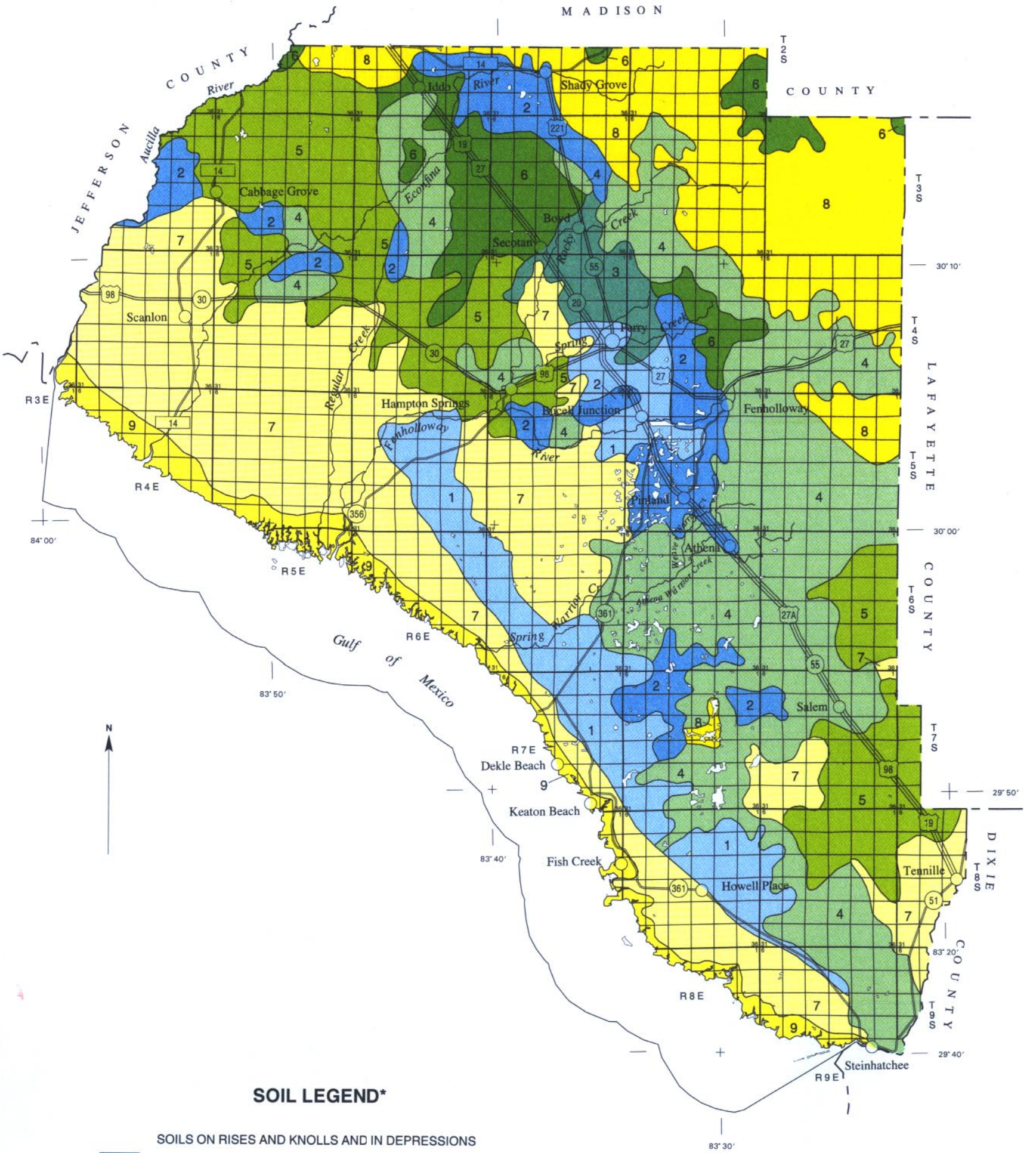
UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCE CONSERVATION SERVICE
in cooperation with
UNIVERSITY OF FLORIDA, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCE, AGRICULTURAL EXPERIMENT STATIONS, AND SOIL AND WATER SCIENCE DEPARTMENT; AND FLORIDA DEPARTMENT OF AGRICULTURAL AND CONSUMER SERVICES

# GENERAL SOIL MAP

## TAYLOR COUNTY, FLORIDA

1 0 1 2 3
MILES
1 0 1 2 3 4 5 6
KILOMETERS




## SOIL LEGEND*

SOILS ON RISES AND KNOLLS AND IN DEPRESSIONS

1 Ortega-Kershaw-Ridgewood

2 Ridgewood-Pamlico-Ortega

3 Albany-Otela-Surrency

SOILS IN AREAS OF FLATWOODS, ON FLATS, IN DEPRESSIONS, AND ON FLOOD PLAINS

4 Leon-Pamlico-Wesconnett

5 Chaires-Meadowbrook-Clara

6 Sapelo-Surrency-Plummer

7 Wekiva-Tooles-Chaires

SOILS IN DEPRESSIONS, ON FLOOD PLAINS, AND IN TIDAL MARSHES

8 Dorovan-Pamlico-Sapelo

9 Bayvi

*The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 1998

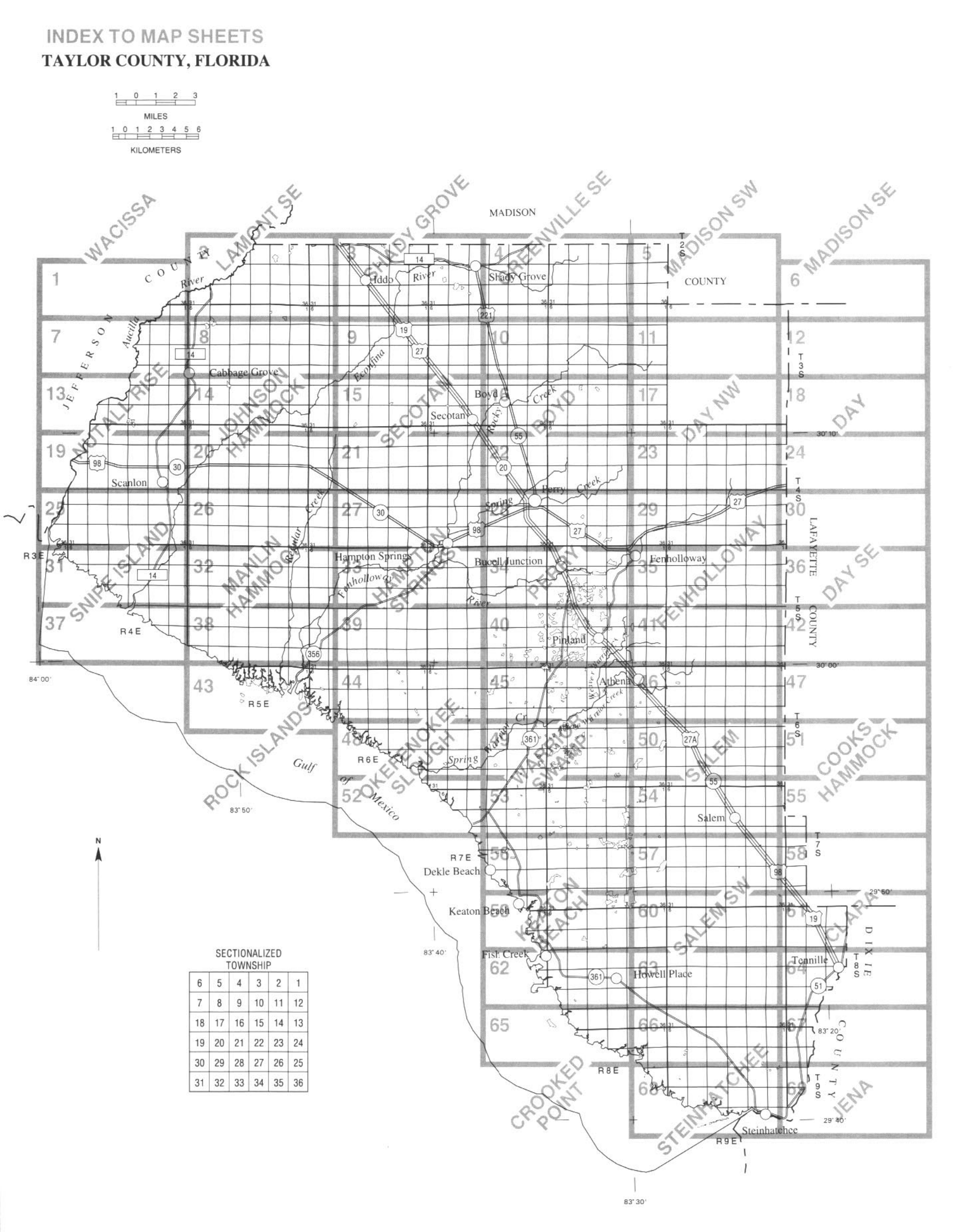
SECTIONALIZED TOWNSHIP

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

*Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.*

# INDEX TO MAP SHEETS

## TAYLOR COUNTY, FLORIDA



# SOIL LEGEND

**Map symbols consist of numbers that represent the kinds of soil. Soil map unit names without a slope phase are nearly level soils or miscellaneous areas.**

### Numerical List

| SYMBOL | NAME |
|---|---|
| 3 | Clara and Osier fine sands |
| 5 | Chaires fine sand |
| 6 | Leon fine sand |
| 8 | Meadowbrook fine sand |
| 9 | Sapelo fine sand |
| 10 | Mandarin-Hurricane complex, 0 to 3 percent slopes |
| 12 | Ortega fine sand, 0 to 5 percent slopes |
| 13 | Hurricane fine sand, 0 to 3 percent slopes |
| 14 | Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes |
| 15 | Ridgewood fine sand, 0 to 3 percent slopes |
| 16 | Lutterloh-Ridgewood complex, 0 to 3 percent slopes |
| 17 | Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded |
| 19 | Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes |
| 20 | Melvina-Mandarin complex, 0 to 3 percent slopes |
| 21 | Kershaw fine sand, 0 to 8 percent slopes |
| 22 | Ocilla fine sand |
| 23 | Melvina-Moriah-Lutterloh complex |
| 24 | Albany sand, 0 to 5 percent slopes |
| 25 | Pottsburg fine sand |
| 26 | Resota-Hurricane complex, 0 to 5 percent slopes |
| 27 | Plummer fine sand |
| 28 | Surrency, Starke, and Croatan soils, depressional |
| 29 | Albany-Surrency, depressional complex, 0 to 3 percent slopes |
| 30 | Dorovan and Pamlico soils, depressional |
| 33 | Wesconnett, Evergreen, and Pamlico soils, depressional |
| 34 | Clara and Bodiford soils, frequently flooded |
| 35 | Tooles, Meadowbrook, and Wekiva soils, frequently flooded |
| 37 | Tooles and Meadowbrook soils, depressional |
| 38 | Clara and Meadowbrook soils, depressional |
| 40 | Lutterloh fine sand, limestone substratum |
| 41 | Tooles-Meadowbrook complex |
| 45 | Chaires fine sand, limestone substratum |
| 46 | Pits |
| 48 | Wekiva-Tennille-Tooles complex, occasionally flooded |
| 49 | Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes |
| 51 | Tooles-Nutall complex, frequently flooded |
| 52 | Clara, depressional-Clara-Meadowbrook complex, occasionally flooded |
| 53 | Bayvi muck, frequently flooded |
| 54 | Meadowbrook-Tooles-Clara, depressional, complex |
| 55 | Arents, moderately wet, rarely flooded |
| 57 | Sapelo mucky fine sand |
| 58 | Leon mucky fine sand |
| 59 | Arents, sanitary landfill |
| 60 | Chaires, limestone substratum-Meadowbrook, limestone substratum,complex, rarely flooded |
| 61 | Wekiva-Tooles, depressional-Tennille complex, rarely flooded |
| 62 | Tooles-Tennille-Wekiva complex, depressional |
| 63 | Steinhatchee fine sand |
| 64 | Tooles-Wekiva complex |
| 65 | Yellowjacket and Maurepas mucks, frequently flooded |
| 67 | Yellowjacket and Maurepas mucks, depressional |
| 68 | Matmon-Wekiva-rock outcrop complex, occasionally flooded |
| 69 | Eunola, Goldhead, and Tooles fine sands, commonly flooded |
| 70 | Chiefland-Chiefland frequently flooded, complex |
| 71 | Leon fine sand, rarely flooded |
| 72 | Chaires fine sand, rarely flooded |
| 73 | Chipley fine sand, 0 to 5 percent slopes |
| 74 | Mascotte sand |
| 99 | Water |

### Alphabetical List

| SYMBOL | NAME |
|---|---|
| 24 | Albany sand, 0 to 5 percent slopes |
| 29 | Albany-Surrency, depressional,complex, 0 to 3 percent slopes |
| 55 | Arents, moderately wet, rarely flooded |
| 59 | Arents, sanitary landfill |
| 53 | Bayvi muck, frequently flooded |
| 5 | Chaires fine sand |
| 45 | Chaires fine sand, limestone substratum |
| 72 | Chaires fine sand, rarely flooded |
| 60 | Chaires, limestone substratum-Meadowbrook, limestone substratum,complex, rarely flooded |
| 70 | Chiefland-Chiefland frequently flooded, complex |
| 73 | Chipley fine sand, 0 to 5 percent slopes |
| 14 | Chipley-Lynn Haven, depressional-Boulogne complex, 0 to 3 percent slopes |
| 34 | Clara and Bodiford soils, frequently flooded |
| 52 | Clara, depressional-Clara-Meadowbrook complex, occasionally flooded |
| 38 | Clara and Meadowbrook soils, depressional |
| 3 | Clara and Osier fine sands |
| 30 | Dorovan and Pamlico soils, depressional |
| 69 | Eunola, Goldhead, and Tooles fine sands, commonly flooded |
| 13 | Hurricane fine sand, 0 to 3 percent slopes |
| 21 | Kershaw fine sand, 0 to 8 percent slopes |
| 6 | Leon fine sand |
| 71 | Leon fine sand, rarely flooded |
| 58 | Leon mucky fine sand |
| 16 | Lutterloh-Ridgewood complex, 0 to 3 percent slopes |
| 40 | Lutterloh fine sand, limestone substratum |
| 10 | Mandarin-Hurricane complex, 0 to 3 percent slopes |
| 74 | Mascotte sand |
| 68 | Matmon-Wekiva-rock outcrop complex, occasionally flooded |
| 8 | Meadowbrook fine sand |
| 54 | Meadowbrook-Tooles-Clara, depressional, complex |
| 23 | Melvina-Moriah-Lutterloh complex |
| 20 | Melvina-Mandarin complex, 0 to 3 percent slopes |
| 22 | Ocilla fine sand |
| 12 | Ortega fine sand, 0 to 5 percent slopes |
| 19 | Otela-Ortega-Lutterloh complex, 0 to 5 percent slopes |
| 17 | Ousley-Leon-Clara complex, 0 to 3 percent slopes, occasionally flooded |
| 46 | Pits |
| 27 | Plummer fine sand |
| 25 | Pottsburg fine sand |
| 26 | Resota-Hurricane complex, 0 to 5 percent slopes |
| 15 | Ridgewood fine sand, 0 to 3 percent slopes |
| 9 | Sapelo fine sand |
| 57 | Sapelo mucky fine sand |
| 49 | Seaboard-Bushnell-Matmon complex, 0 to 3 percent slopes |
| 63 | Steinhatchee fine sand |
| 28 | Surrency, Starke, and Croatan soils, depressional |
| 41 | Tooles-Meadowbrook complex |
| 37 | Tooles and Meadowbrook soils, depressional |
| 35 | Tooles, Meadowbrook, and Wekiva soils, frequently flooded |
| 51 | Tooles-Nutall complex, frequently flooded |
| 62 | Tooles-Tennille-Wekiva complex, depressional |
| 64 | Tooles-Wekiva complex |
| 99 | Water |
| 48 | Wekiva-Tennille-Tooles complex, occasionally flooded |
| 61 | Wekiva-Tooles, depressional-Tennille complex, rarely flooded |
| 33 | Wesconnett, Evergreen, and Pamlico soils, depressional |
| 67 | Yellowjacket and Maurepas mucks, depressional |
| 65 | Yellowjacket and Maurepas mucks, frequently flooded |

# CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

## CULTURAL FEATURES

BOUNDARIES

- County or parish
- Land grant
- Field sheet matchline and neatline

AD HOC BOUNDARY (label)

- Small airport, airfield, park, oilfield, cemetery, or flood pool

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(sections and land grants)

ROAD EMBLEM & DESIGNATIONS

- Federal
- State
- County, farm or ranch

DAMS

- Medium or Small (Named where applicable)

PITS

- Mine or quarry

POWER TRANSMISSION LINE
(normally not shown)

PIPE LINE (normally not shown)

FENCE (normally not shown)

LEVEES

- Without road
- With road
- With railroad

MISCELLANEOUS CULTURAL FEATURES

- School
- Located object (label) — Tower

## WATER FEATURES

DRAINAGE

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end
- Canals or ditches
  - Double-line (label) — CANAL
  - Drainage and/or irrigation

LAKES, PONDS AND RESERVOIRS

- Perennial

MISCELLANEOUS WATER FEATURES

- Wet spot

## SPECIAL SYMBOLS FOR SOIL SURVEY

- SOIL DELINEATIONS AND SYMBOLS — 38 45
- ESCARPMENTS
- SHORT STEEP SLOPE
- GULLY
- DEPRESSION, closed
- SINKHOLE
- SOIL SAMPLE (normally not shown)

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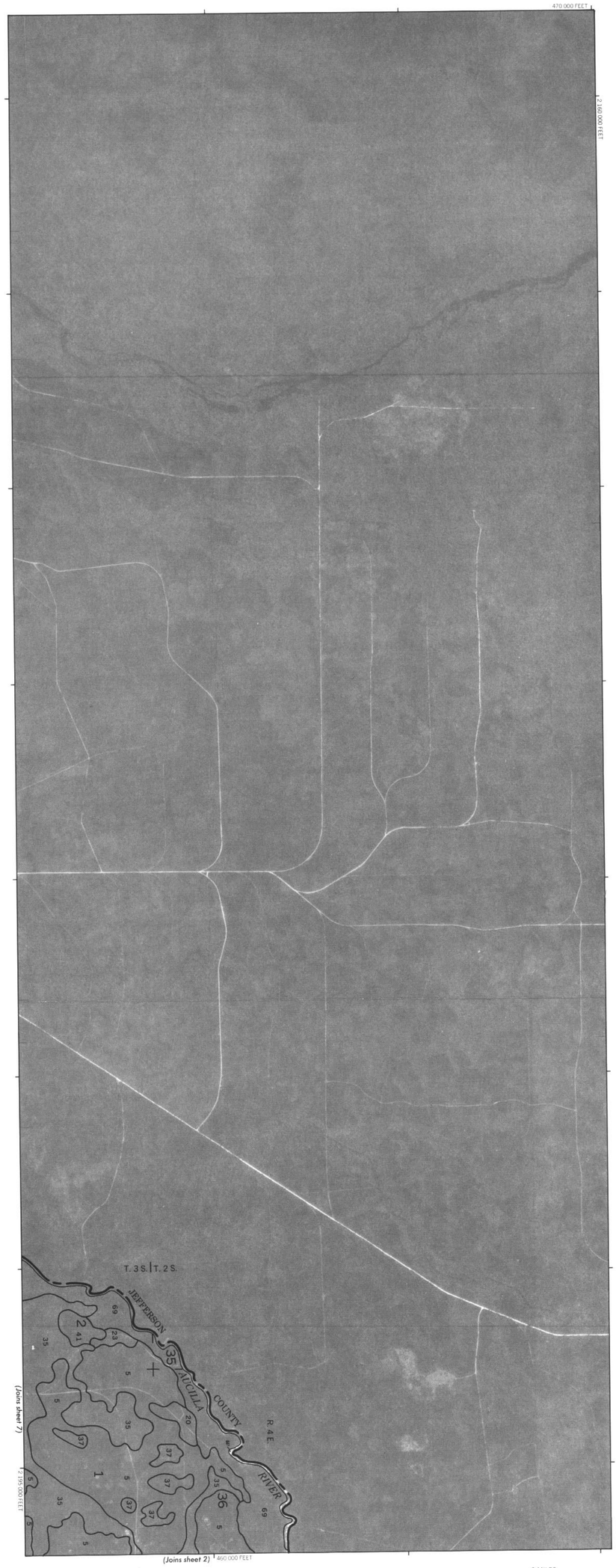
TAYLOR COUNTY, FLORIDA NO. 1



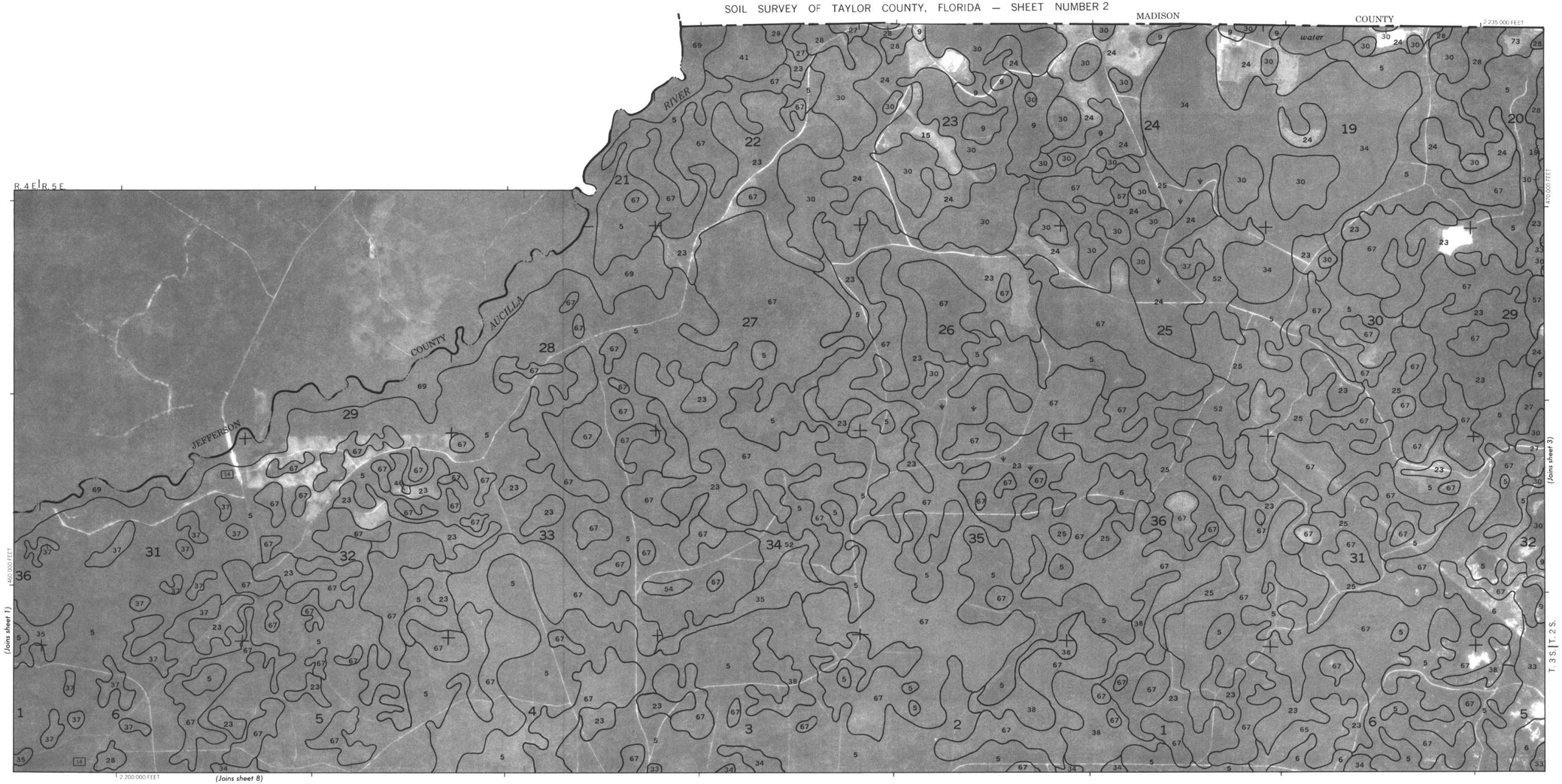

1 3/4 1/2 1/4 0 1 2 MILES

0.5 0 1 2 KILOMETERS

N

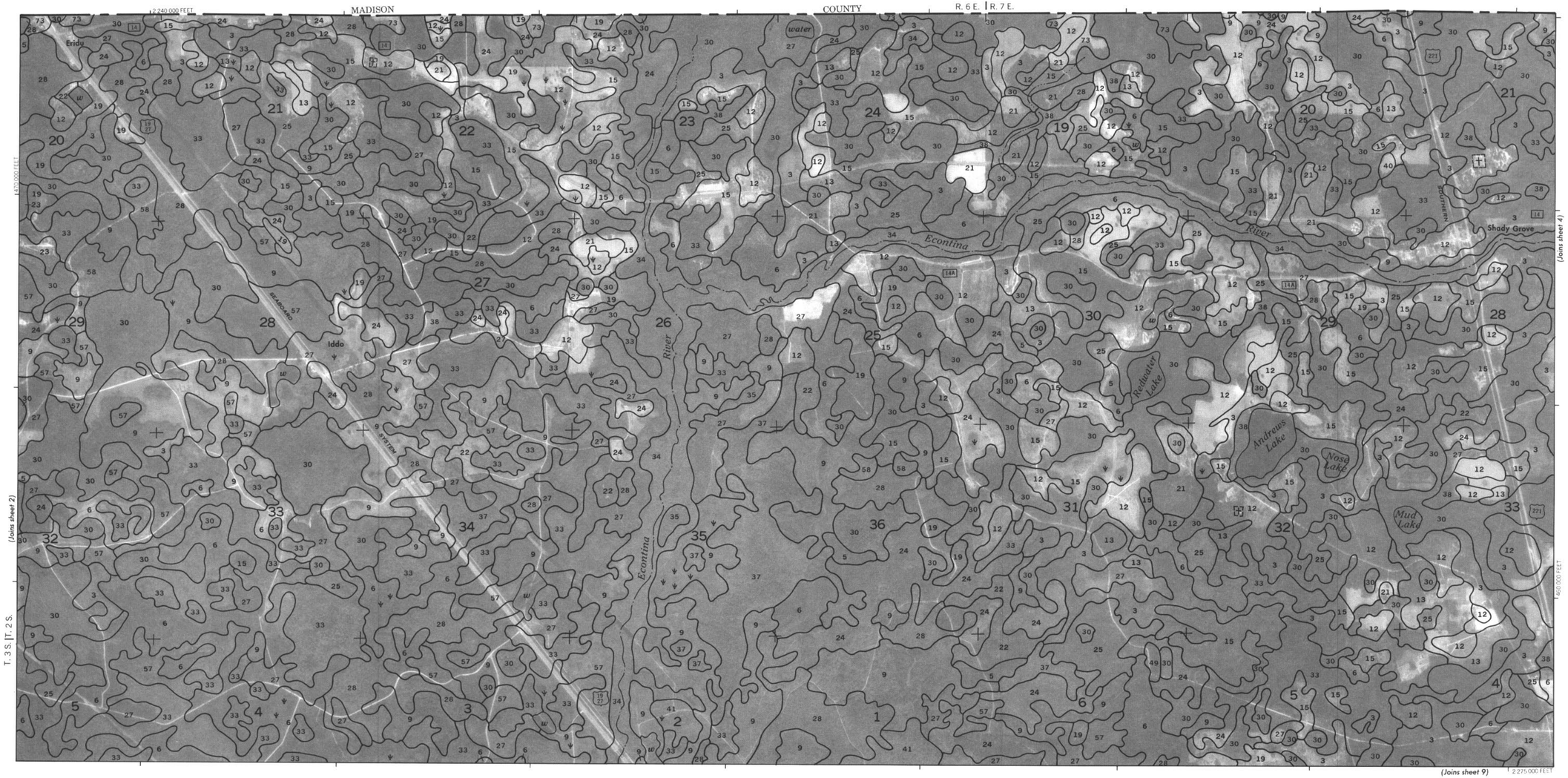
SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 1

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 2




TAYLOR COUNTY, FLORIDA NO. 2

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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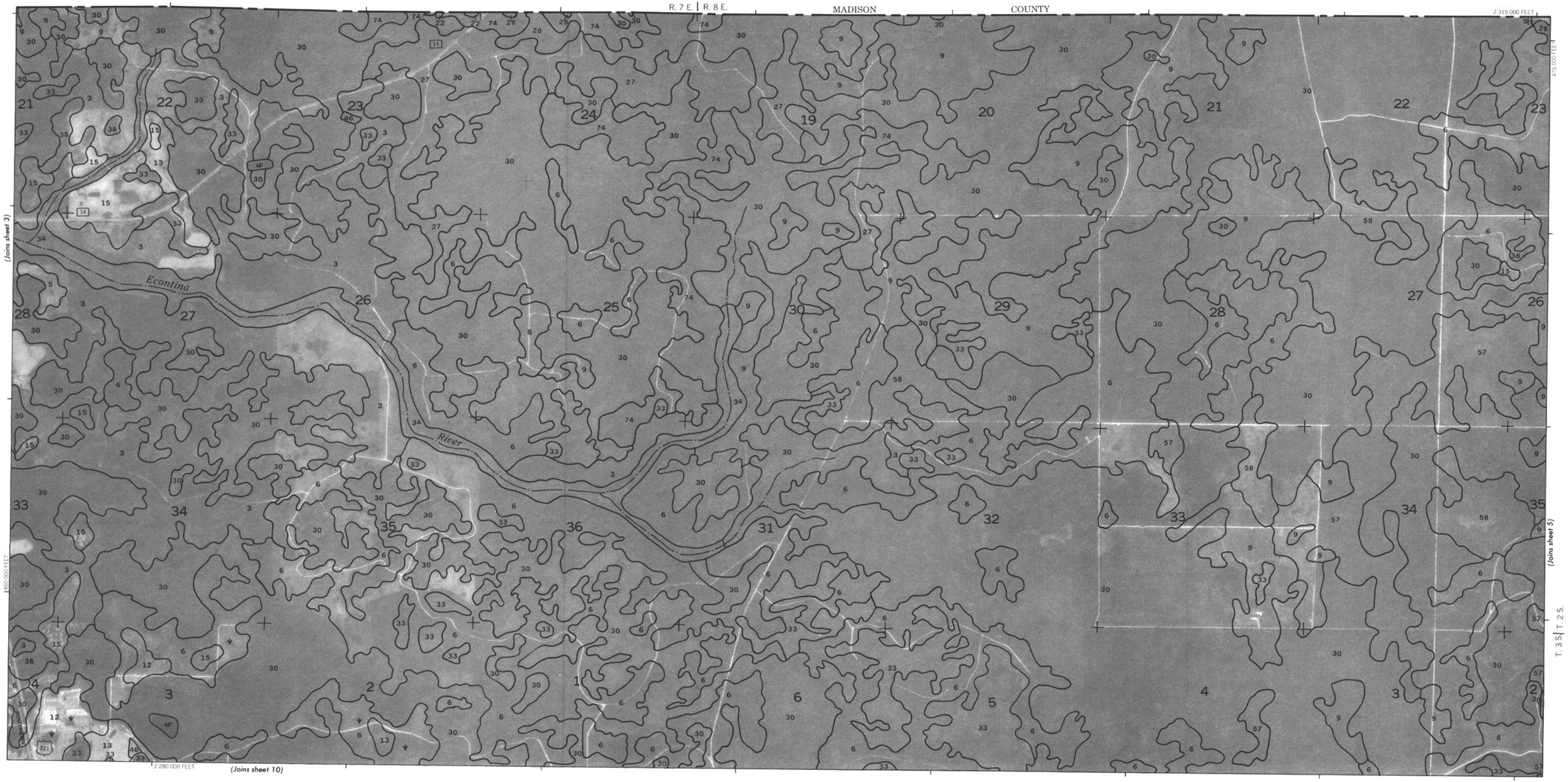
TAYLOR COUNTY, FLORIDA NO. 3

# SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 4




TAYLOR COUNTY, FLORIDA NO. 4

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 5

5

N

2 MILES
2 KILOMETERS
1/4
1/2
3/4

This soil survey map was compiled by the U.S. Department of Agriculture Soil Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA 7, 5

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 6

TAYLOR COUNTY, FLORIDA NO. 6

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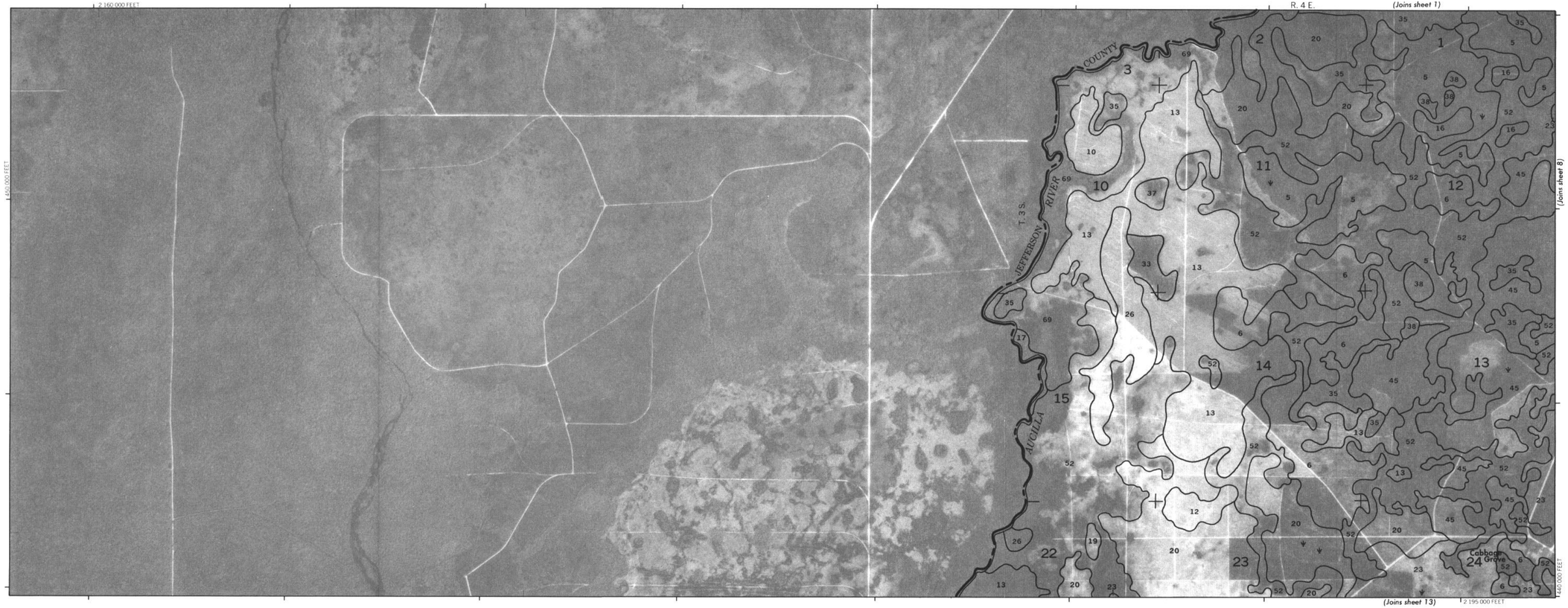


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983, 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 7

TAYLOR COUNTY, FLORIDA NO. 8

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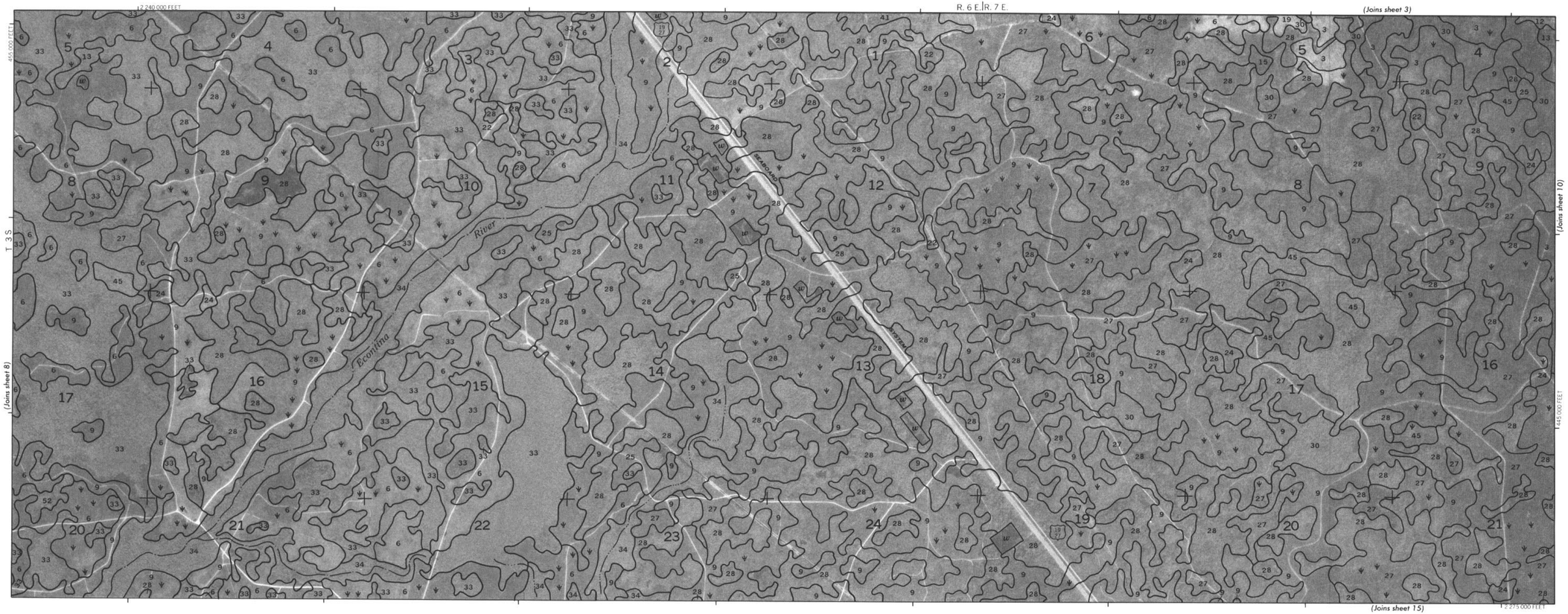
SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 9




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 9

9

N

2 MILES

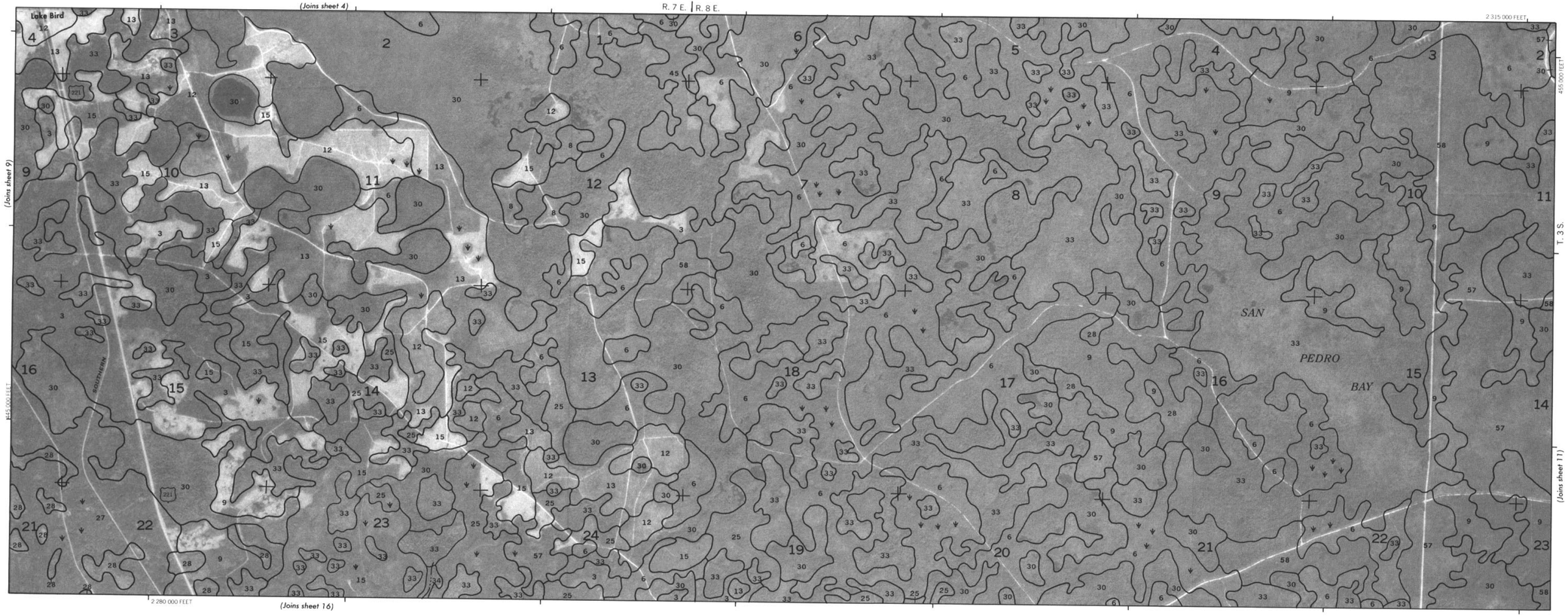
2 KILOMETERS

1/4

1/2

3/4

0.5




TAYLOR COUNTY, FLORIDA NO. 10

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 11

R. 8 E. | R. 9 W.

T. 3 S.

2 320 000 FEET

455 000 FEET

435 000 FEET

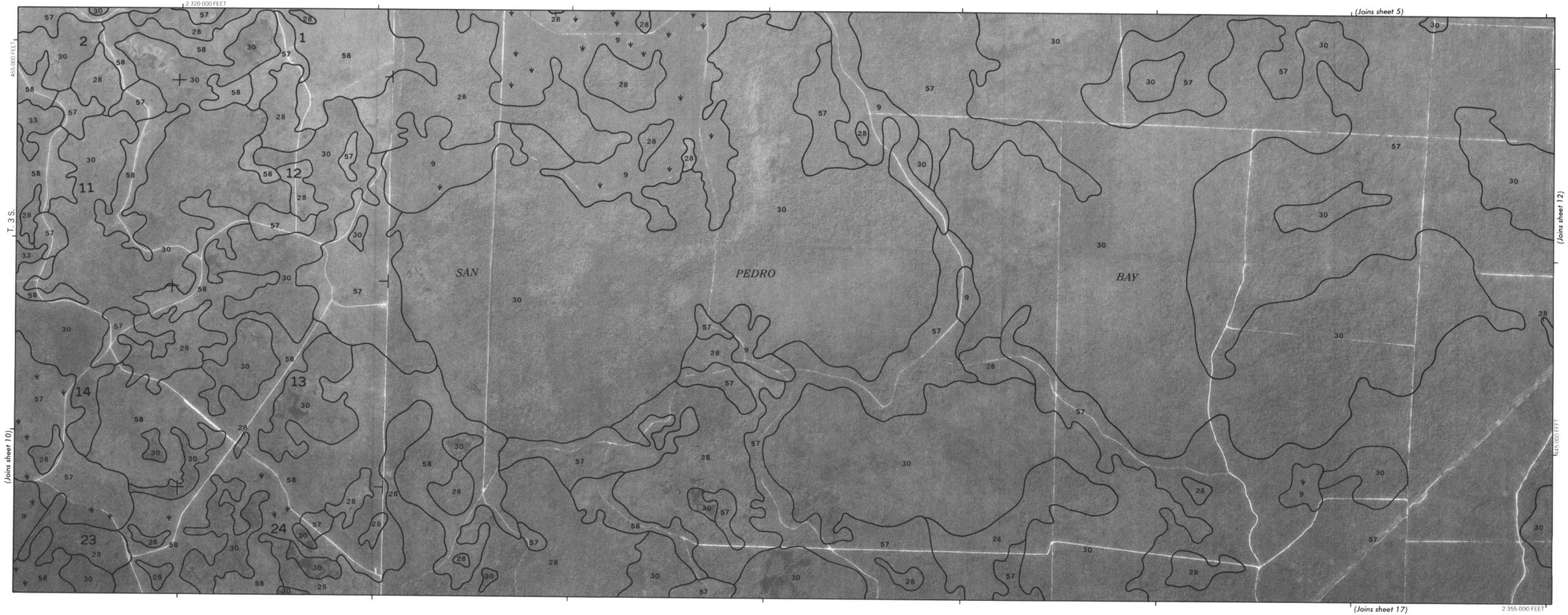
2 355 000 FEET

(Joins sheet 5)

(Joins sheet 10)

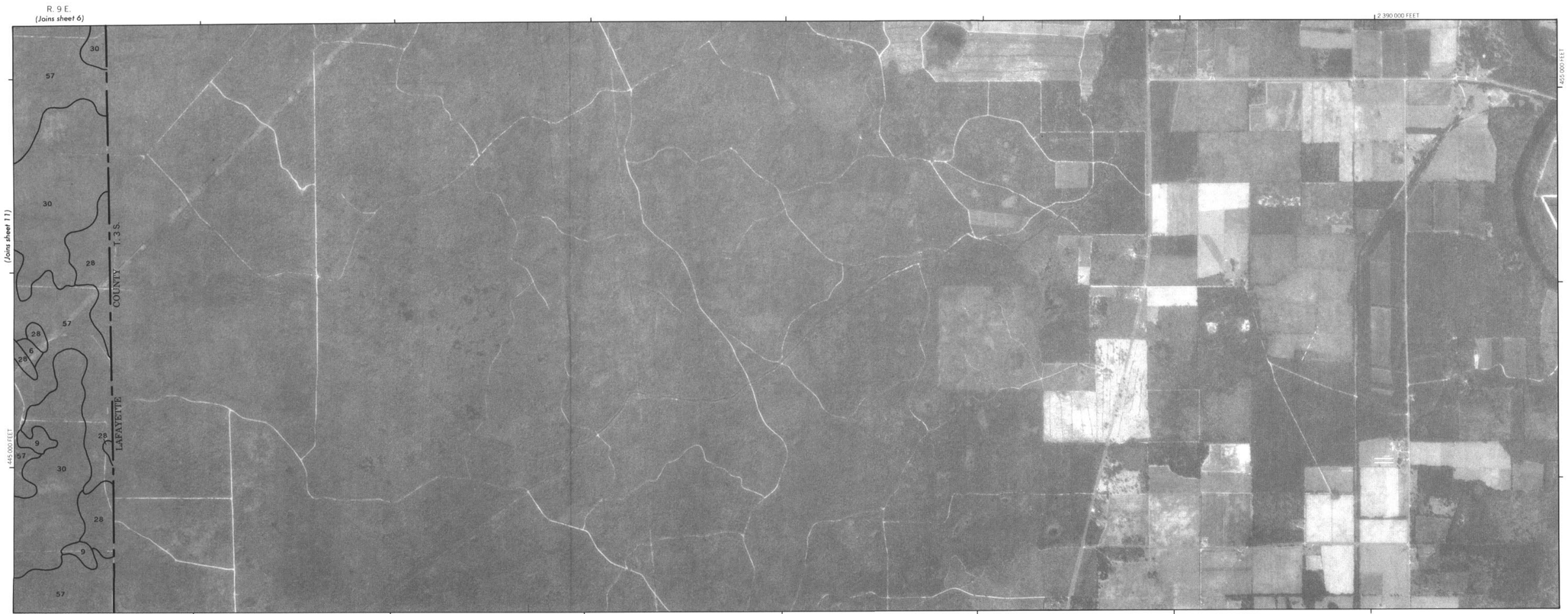
(Joins sheet 12)

(Joins sheet 17)




N

2 MILES
2 KILOMETERS
1
1
0
0
1/4
0.5
1/2
1
3/4
1




TAYLOR COUNTY, FLORIDA NO. 12

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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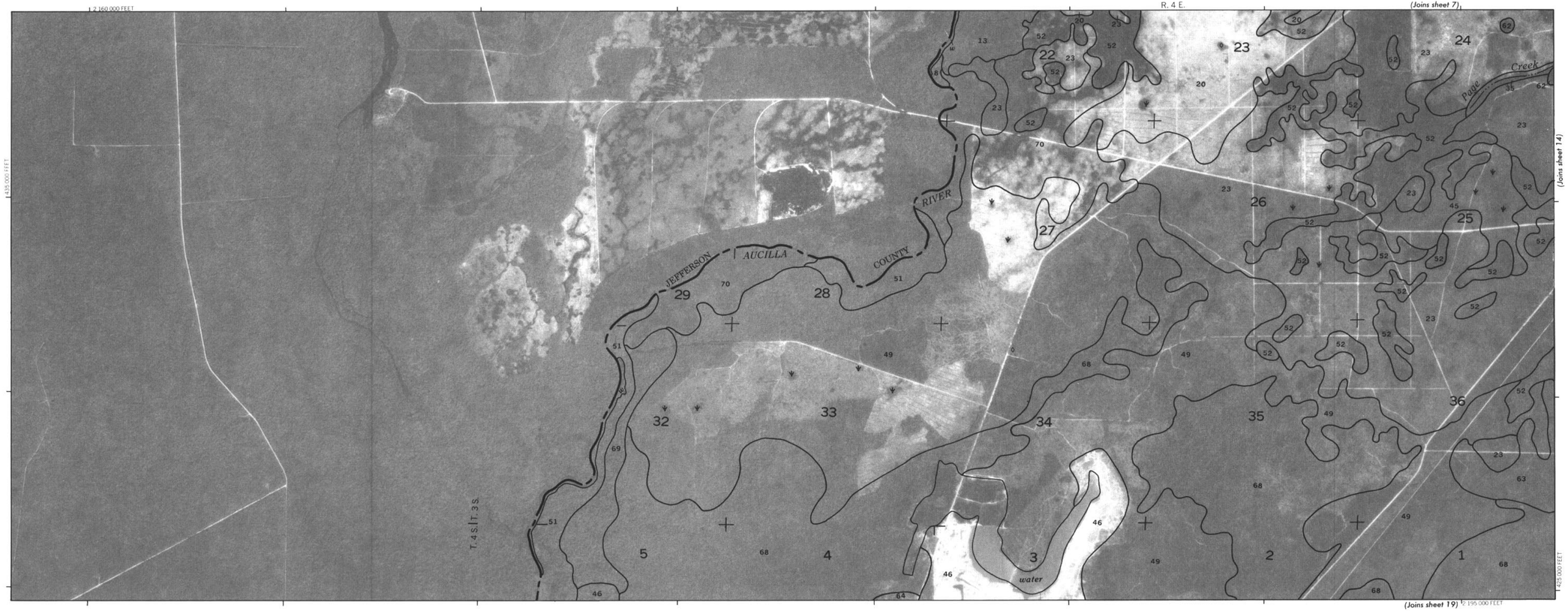
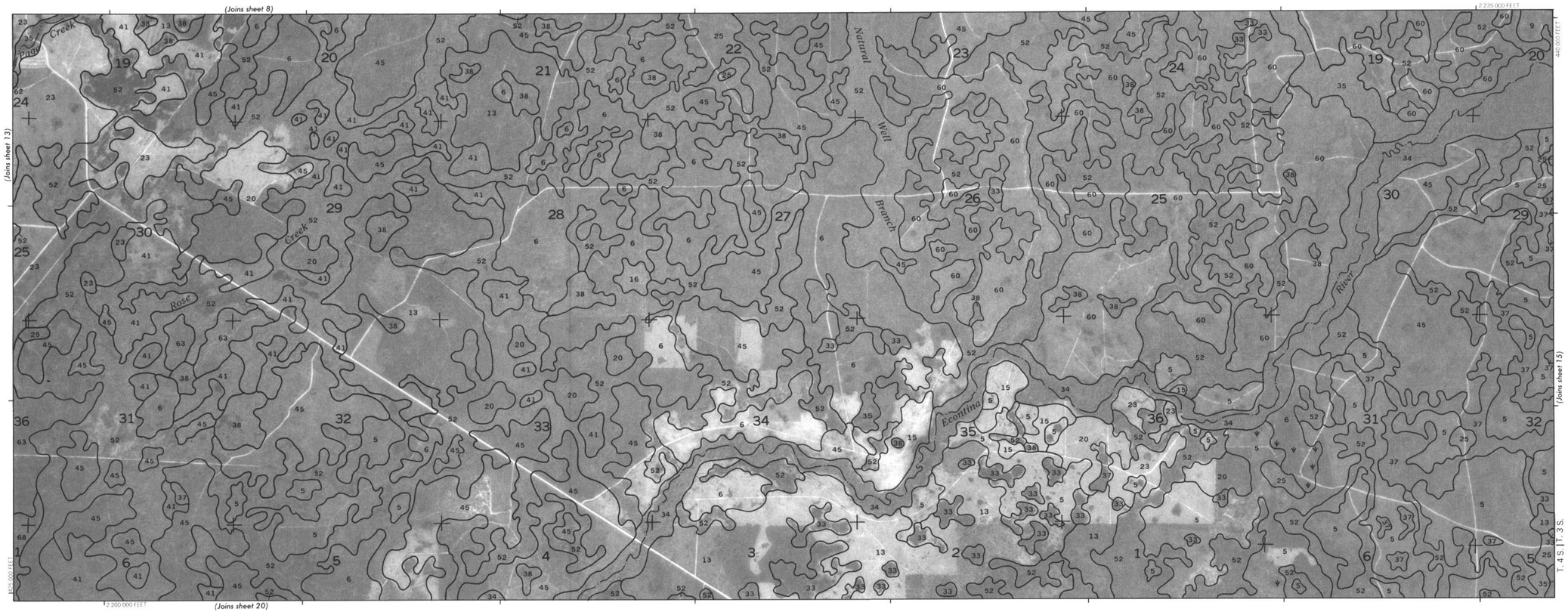
TAYLOR COUNTY, FLORIDA NO. 13






TAYLOR COUNTY, FLORIDA NO. 14

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base map was prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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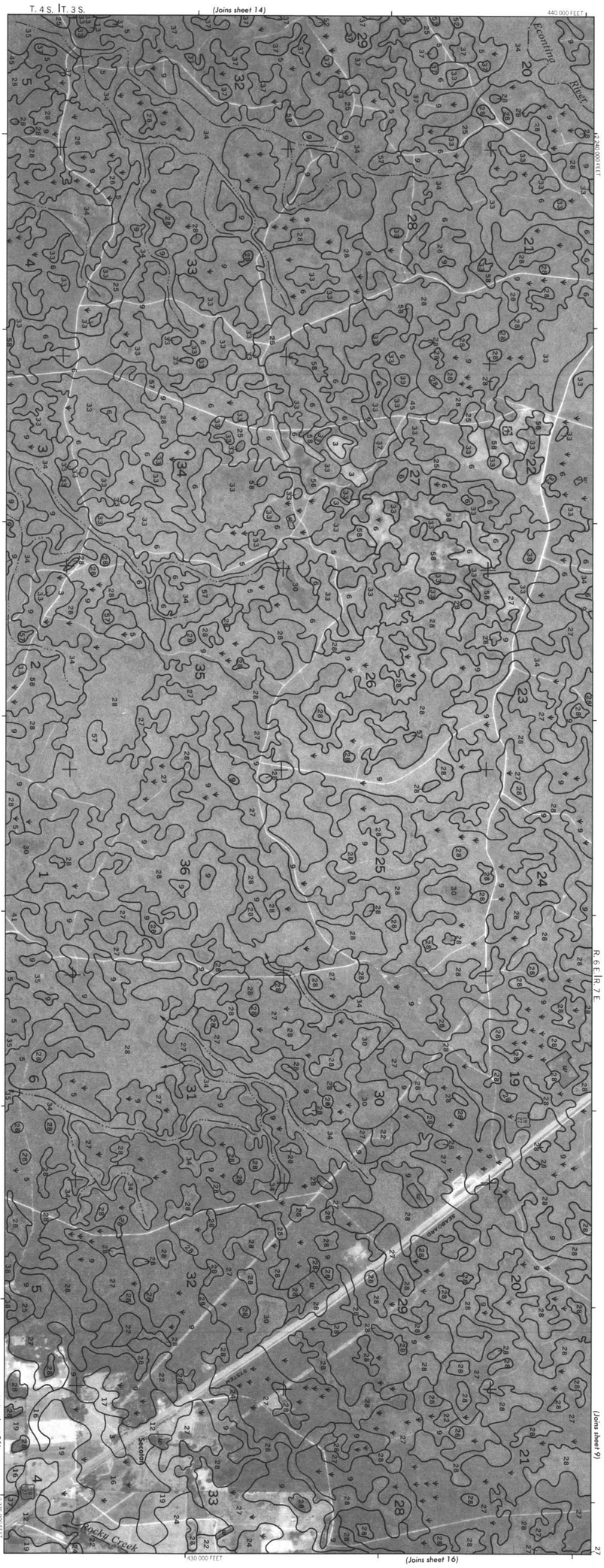
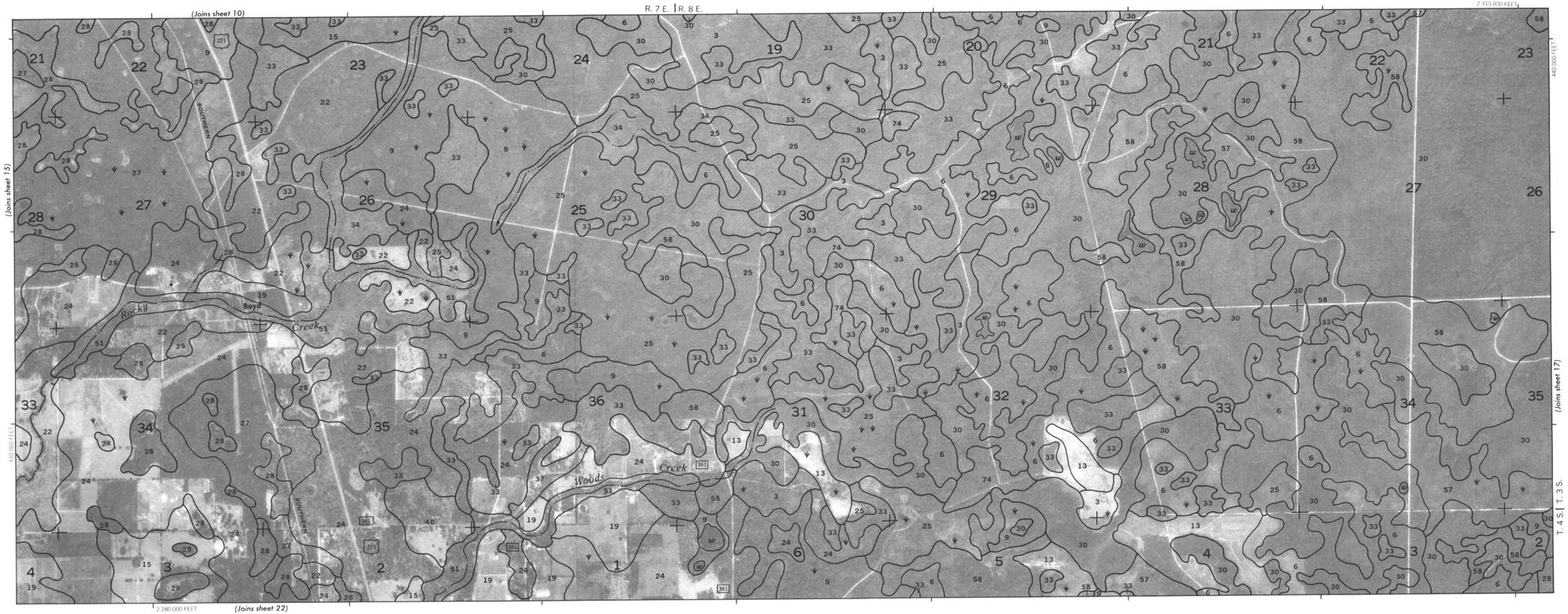
TAYLOR COUNTY, FLORIDA NO. 15




SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 15

16

N




TAYLOR COUNTY, FLORIDA NO. 16

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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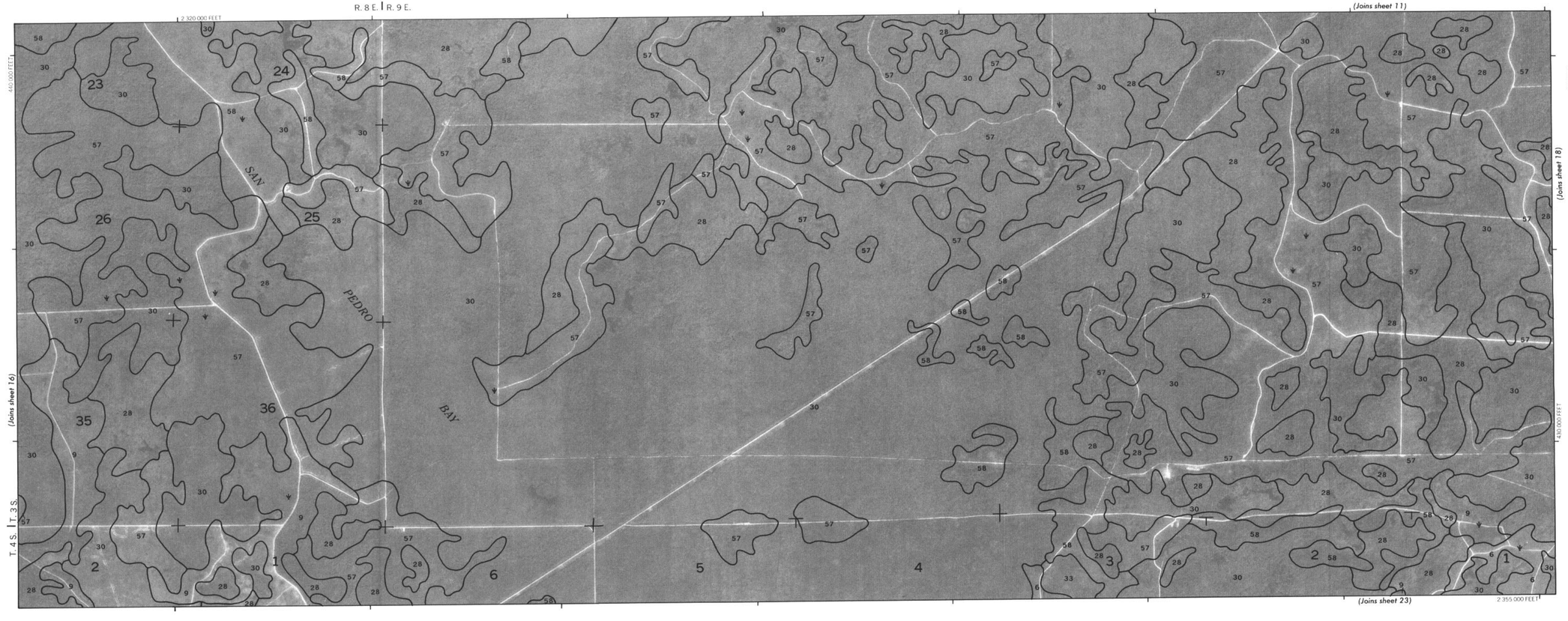
TAYLOR COUNTY, FLORIDA NO. 17



TAYLOR COUNTY, FLORIDA NO. 18

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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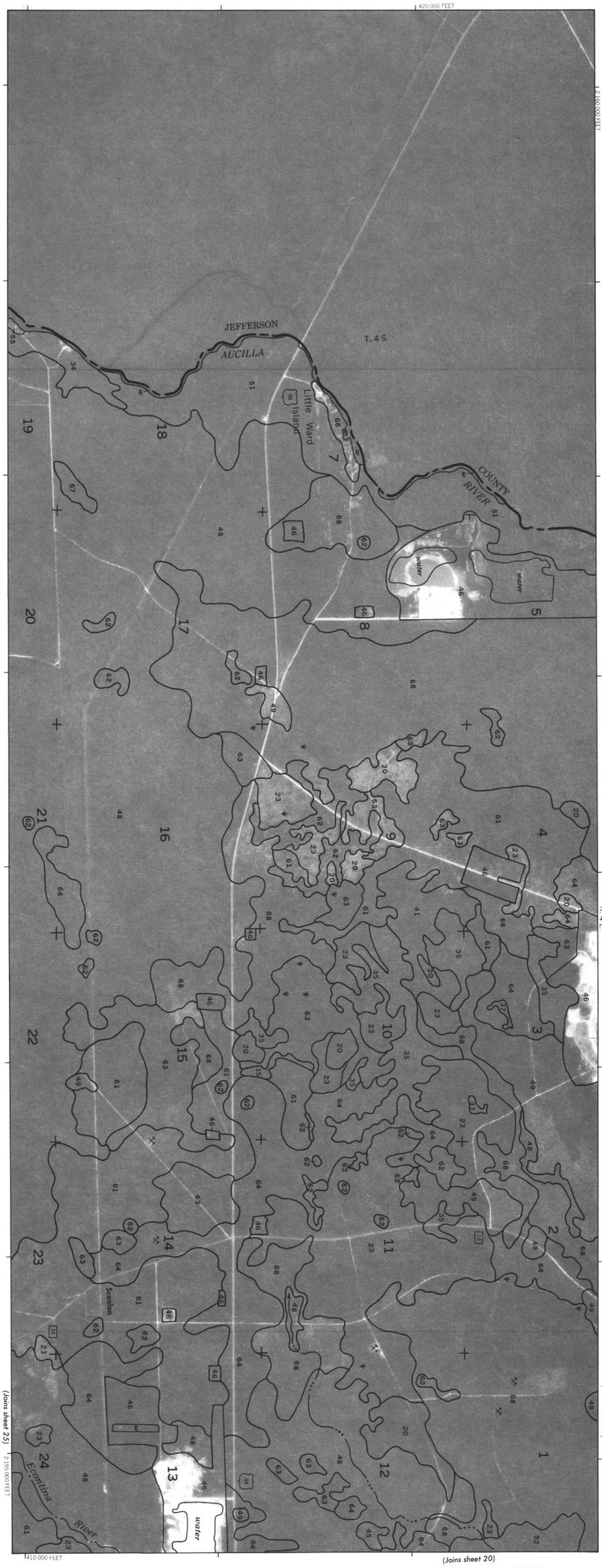
TAYLOR COUNTY, FLORIDA NO. 19




1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

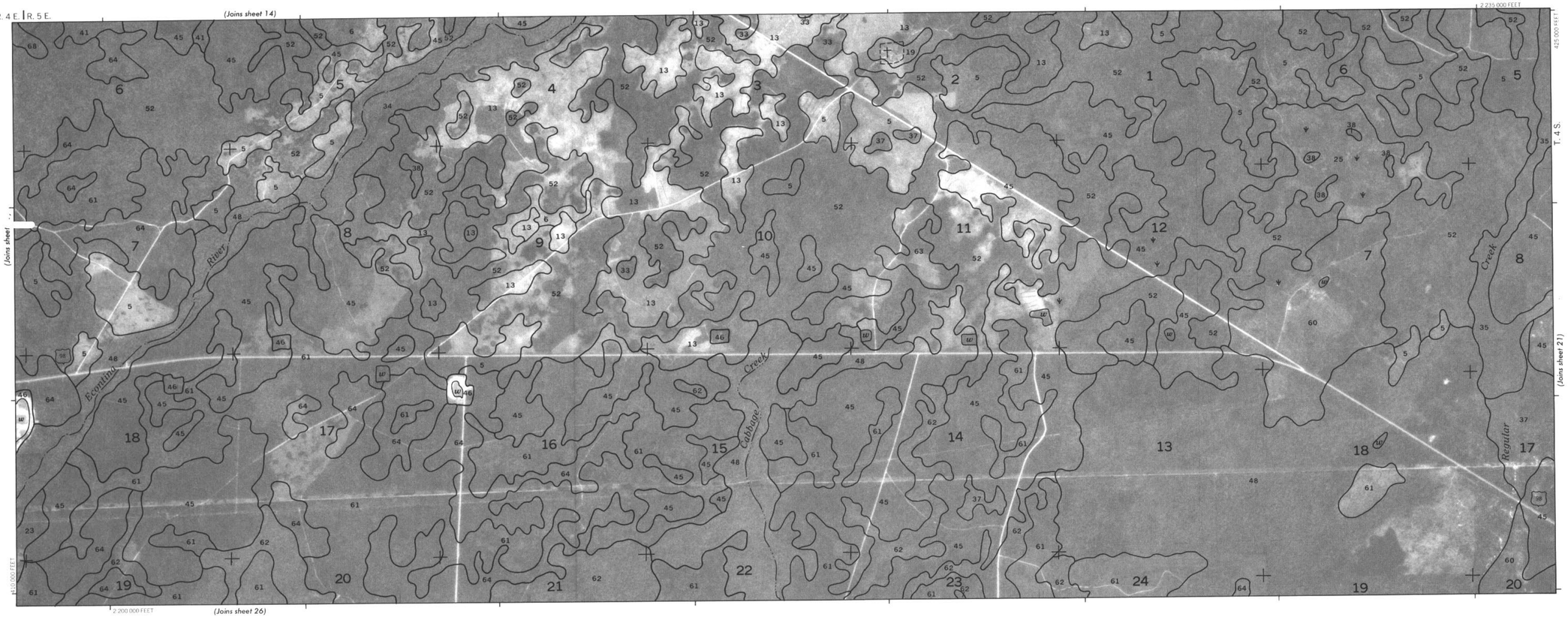
N

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 19

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 20

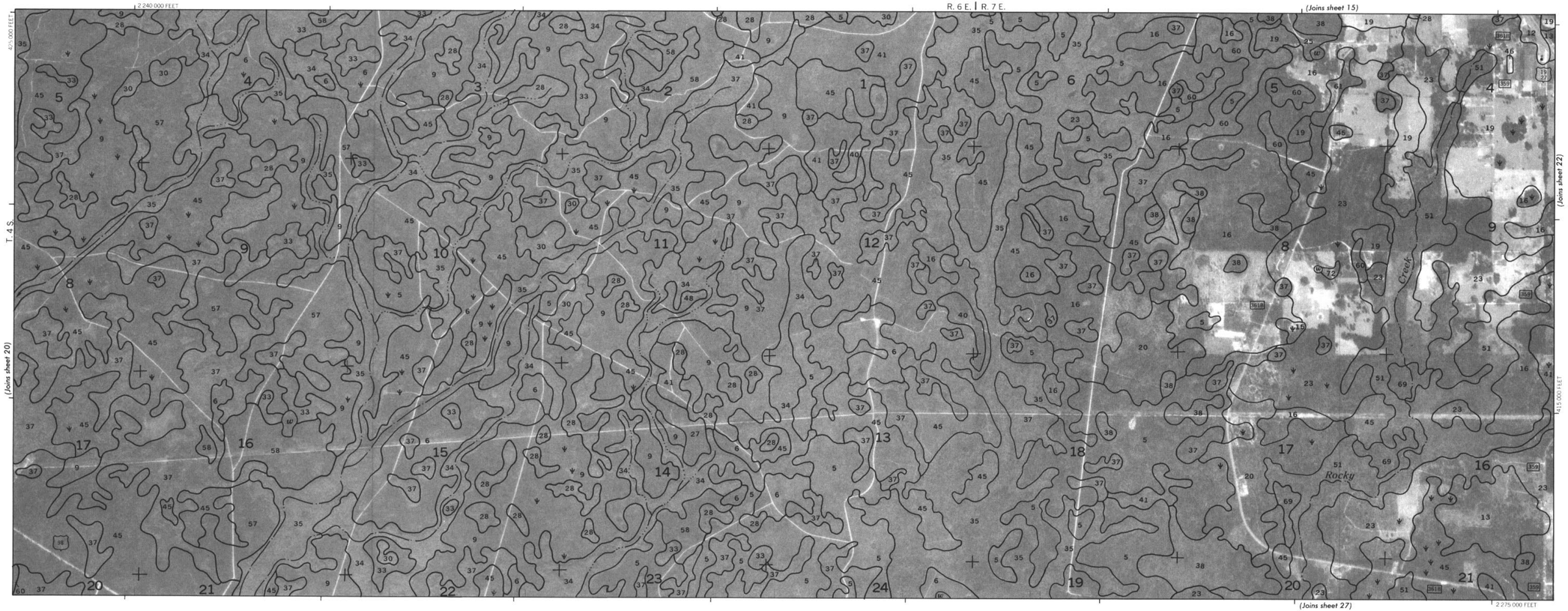
20

N




TAYLOR COUNTY, FLORIDA NO. 20

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are from digital data files of the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately positioned.




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 21

22

N

TAYLOR COUNTY, FLORIDA NO. 22

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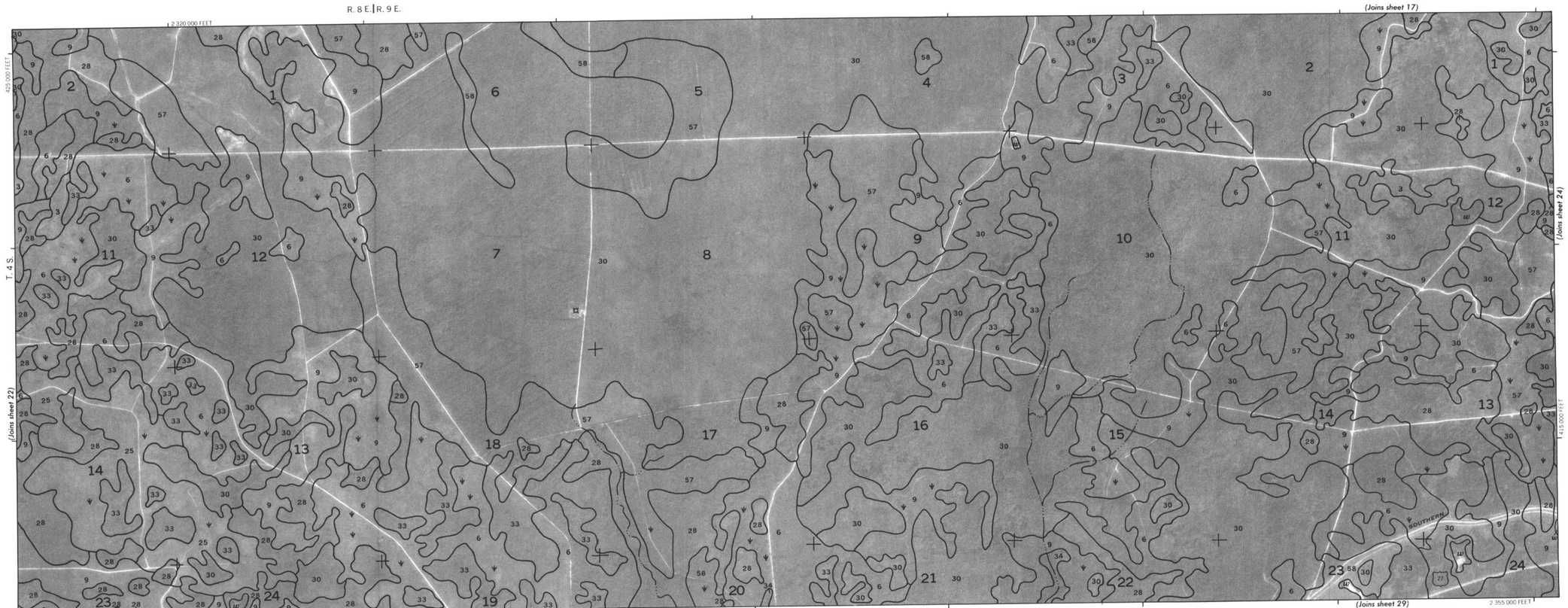
TAYLOR COUNTY, FLORIDA NO. 23



TAYLOR COUNTY, FLORIDA NO. 24

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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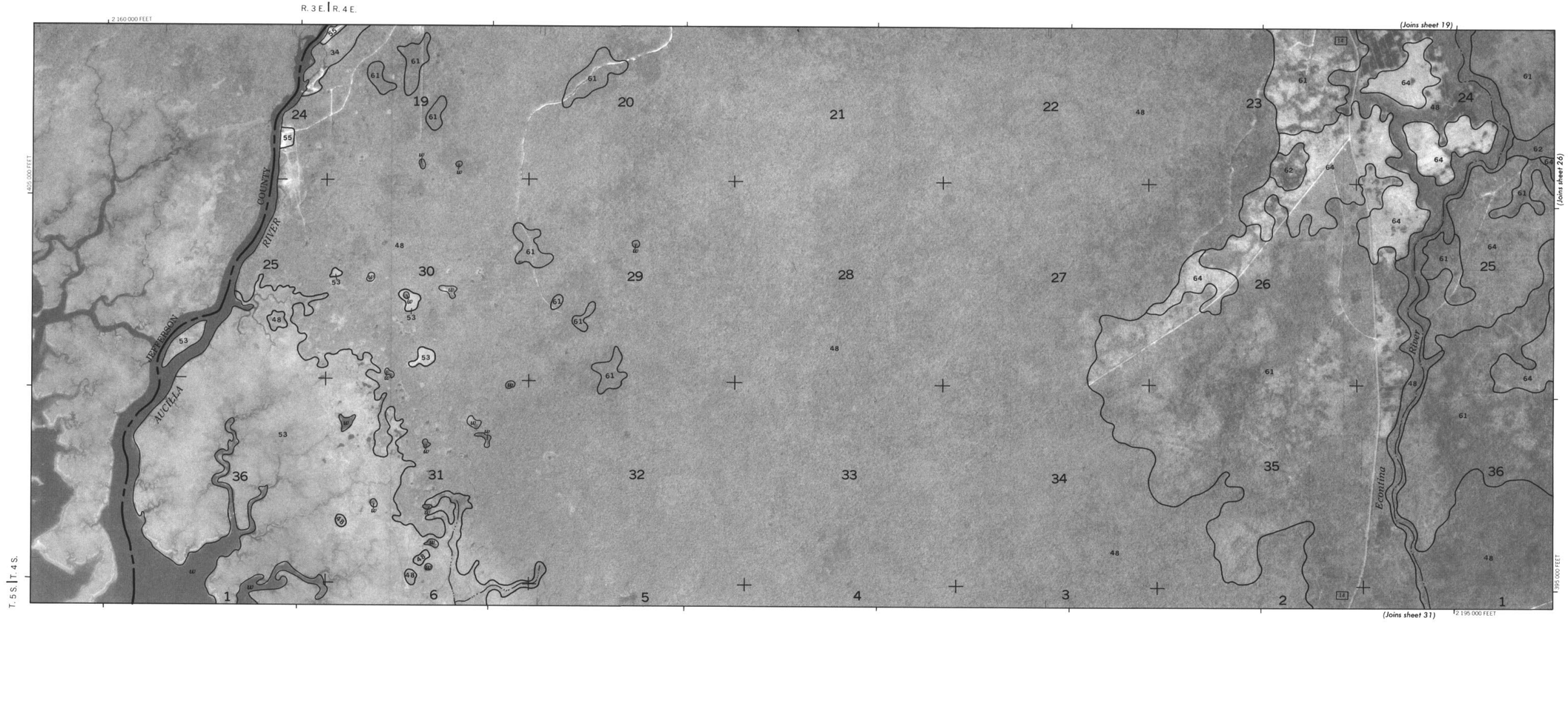
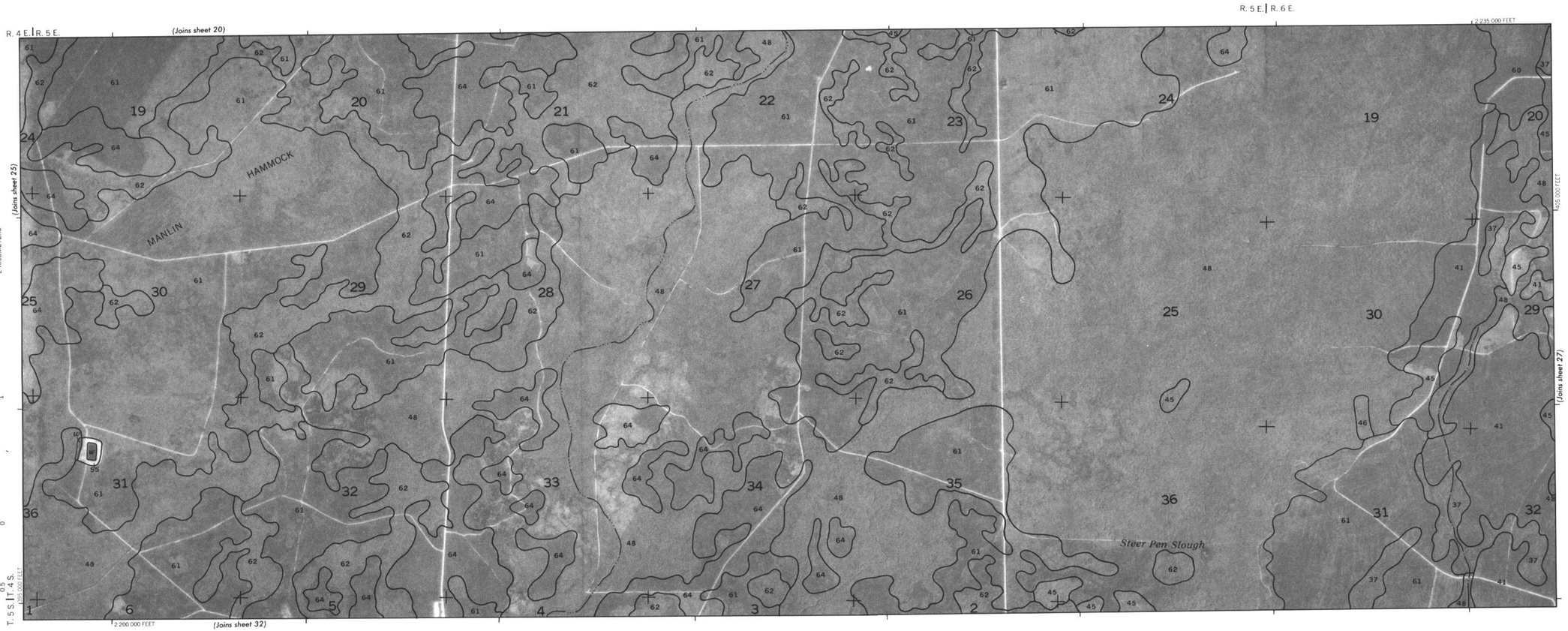
TAYLOR COUNTY, FLORIDA NO. 25

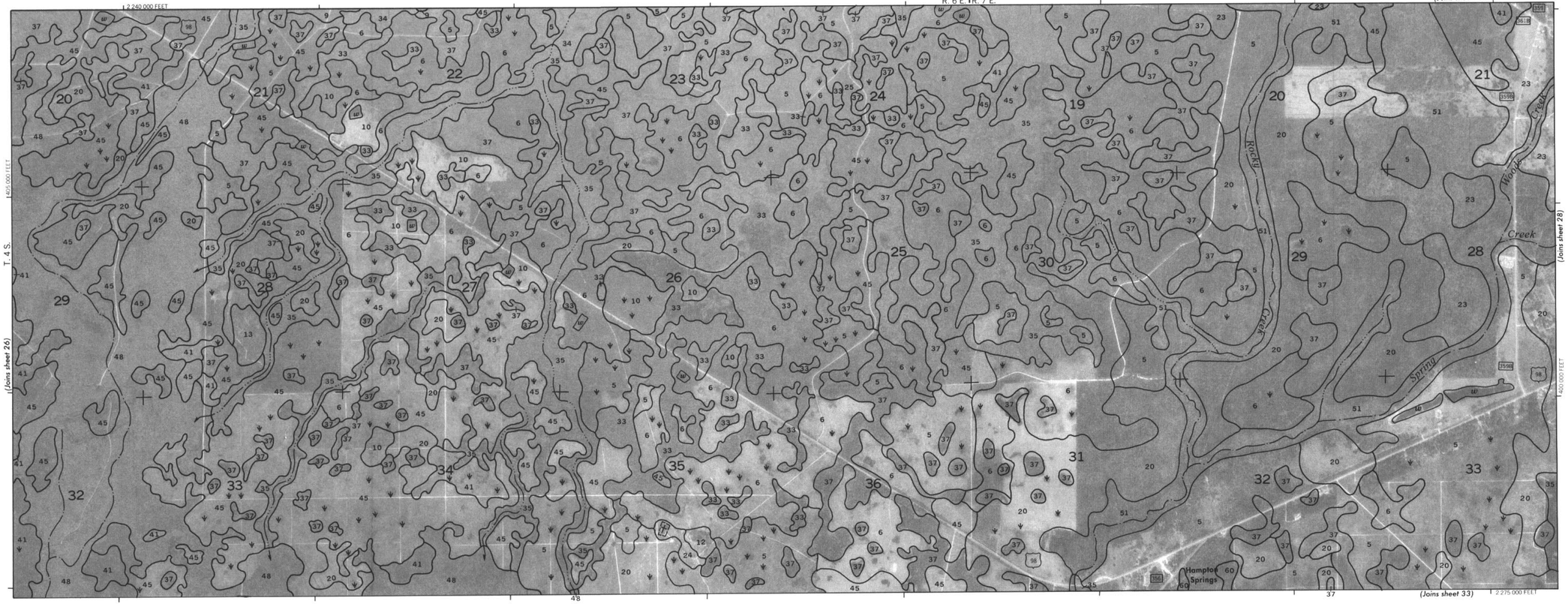





TAYLOR COUNTY, FLORIDA NO. 26

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

N




2 MILES
2 KILOMETERS

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983, 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 27

TAYLOR COUNTY, FLORIDA NO. 28

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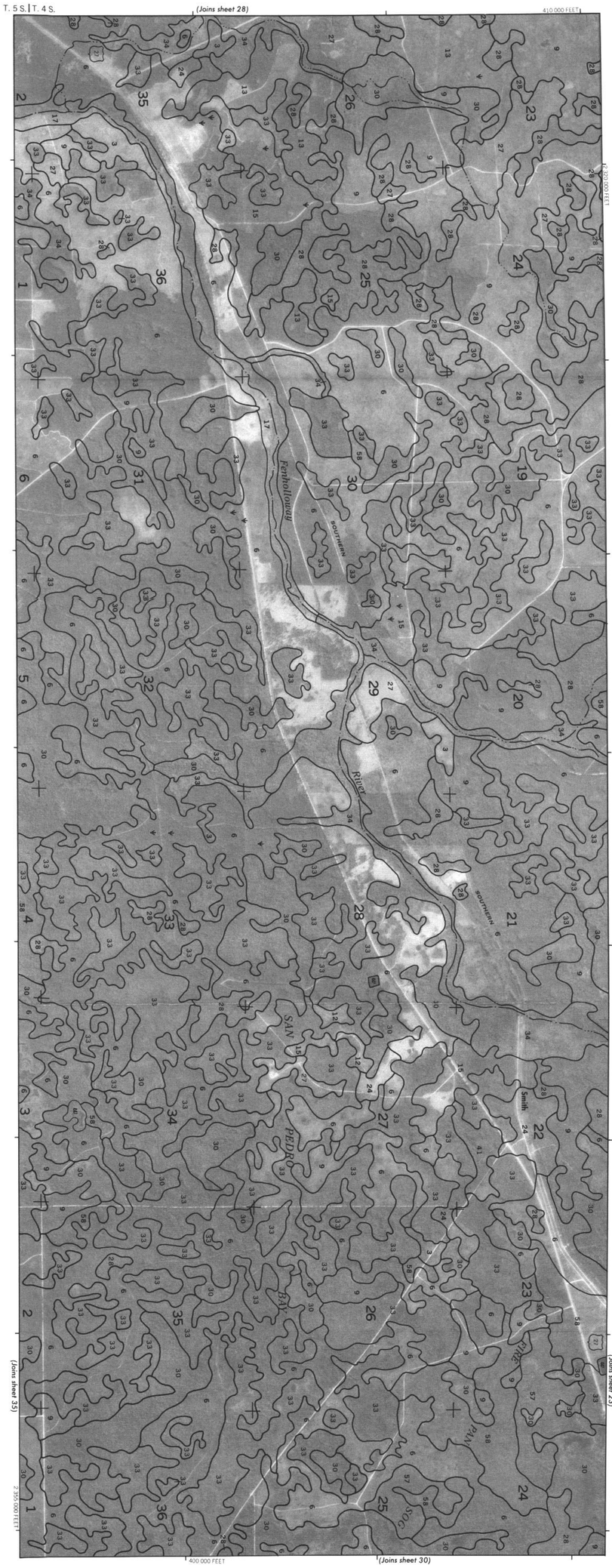
TAXLOR COUNTY, FLORIDA NO. 29




1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N



SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 29

30

N

R. 9 E.

(Joins sheet 24)

2 MILES

2 KILOMETERS

1/4

1/2

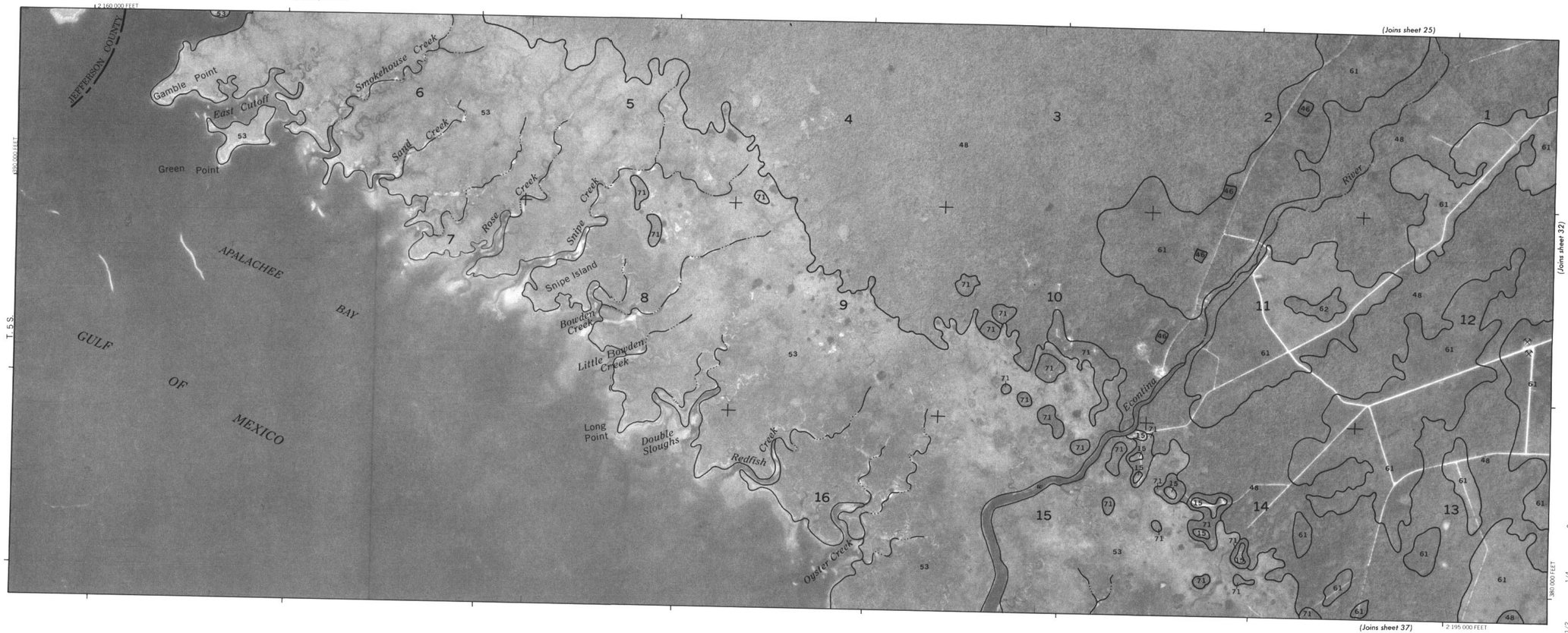
3/4

(Joins sheet 29)

(Joins sheet 36)

TAYLOR COUNTY, FLORIDA NO. 30

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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TAYLOR COUNTY, FLORIDA NO. 31

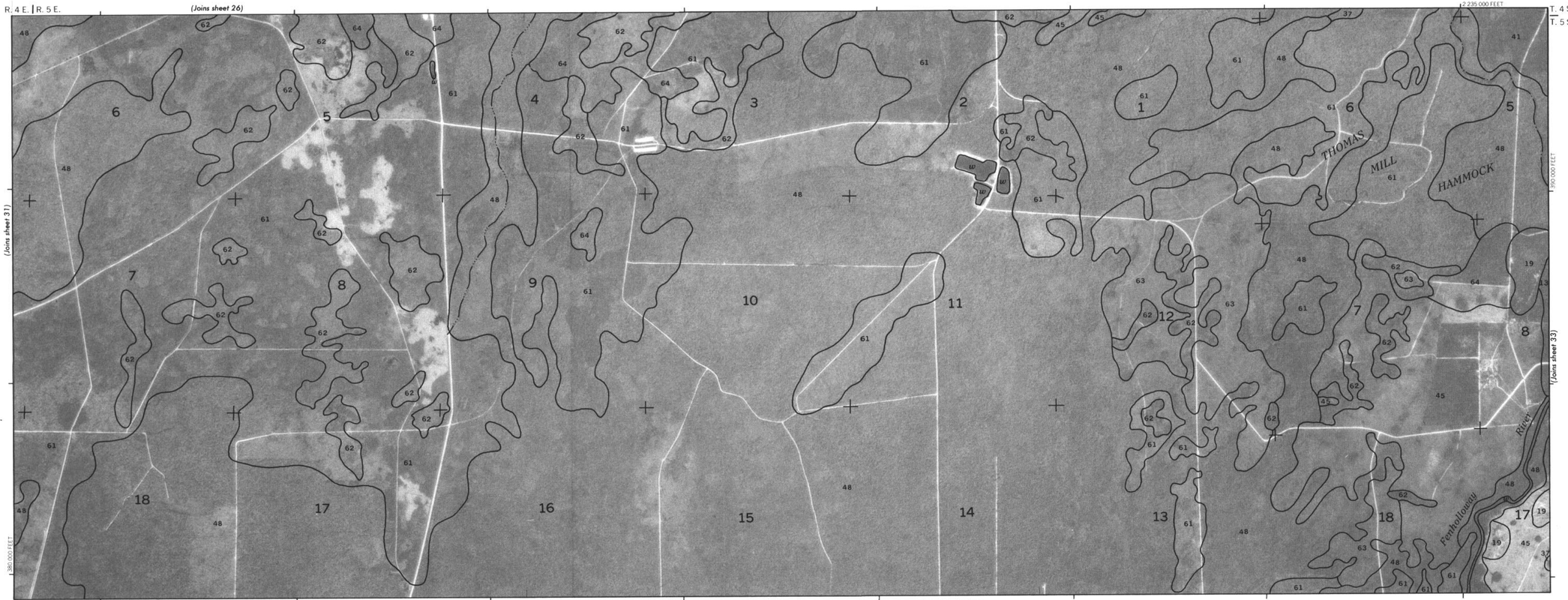
32

N

R. 4 E. | R. 5 E. (Joins sheet 26)

R. 5 E. | R. 6 E.

T. 4 S.
T. 5 S.




2 MILES
2 KILOMETERS

TAYLOR COUNTY, FLORIDA NO. 32

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base map was prepared by the U.S. Department of the Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 33

N

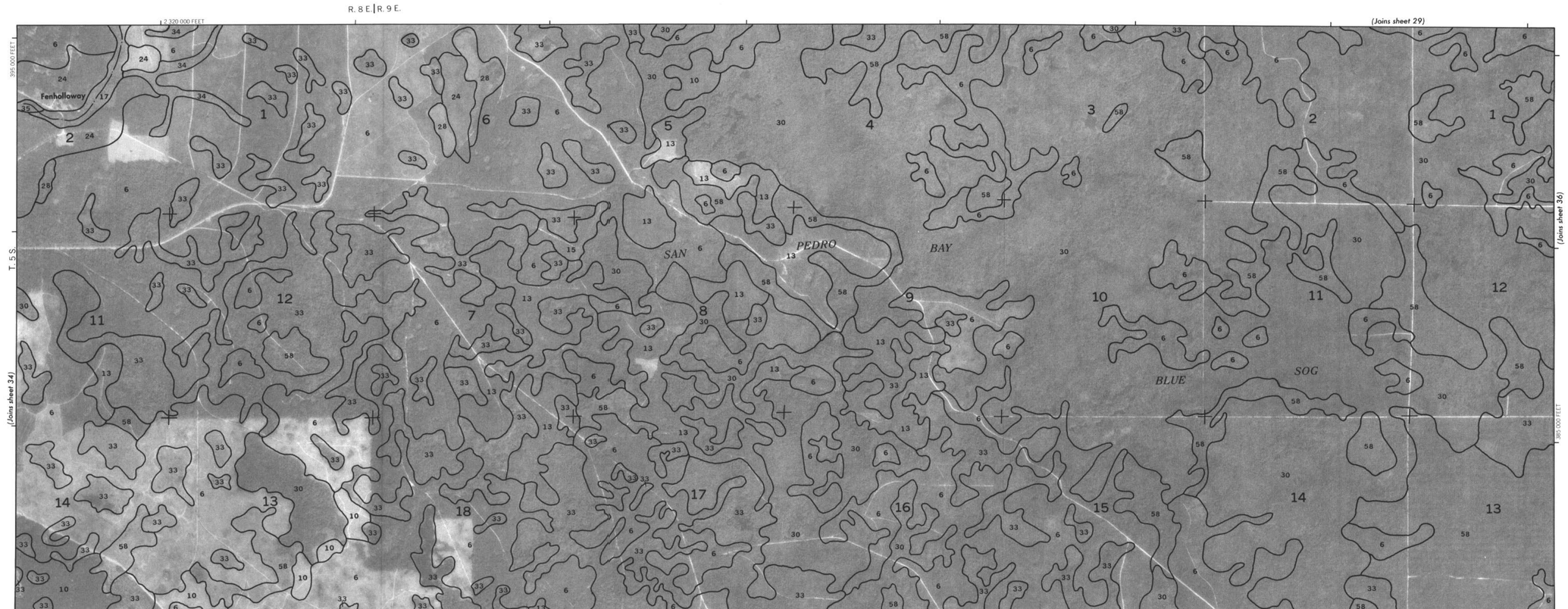
2 MILES
2 KILOMETERS

TAYLOR COUNTY, FLORIDA NO. 34

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 35




35

N

2 MILES
2 KILOMETERS

36

N

2 MILES 1 0 1/4 0.5 1/2 1 3/4 1

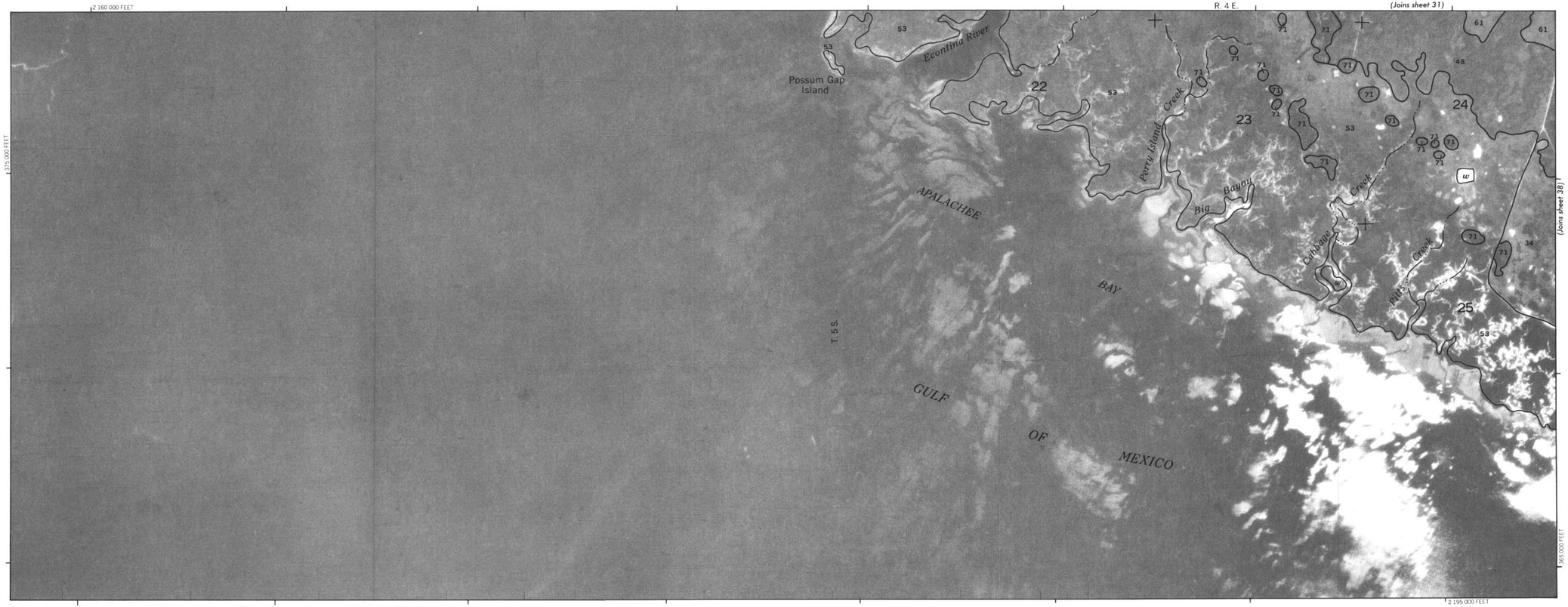
2 KILOMETERS 1 0 1 1

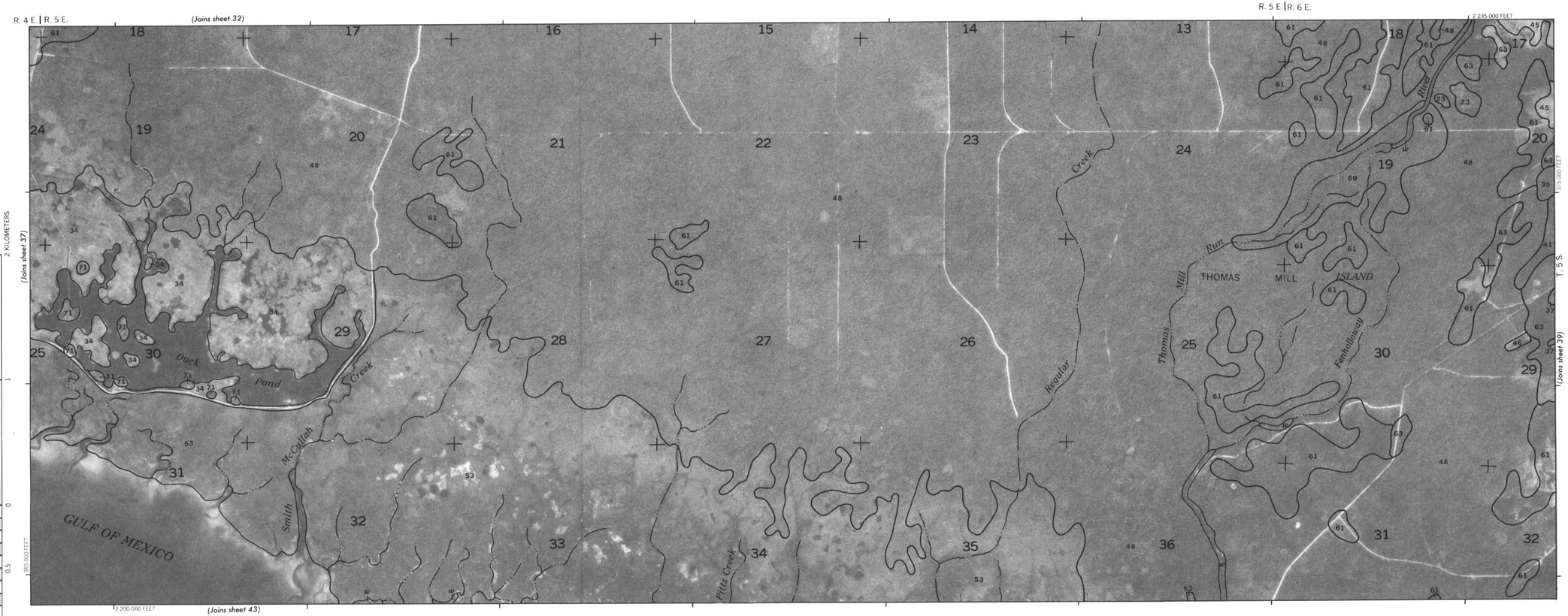
TAYLOR COUNTY, FLORIDA NO. 36

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 37



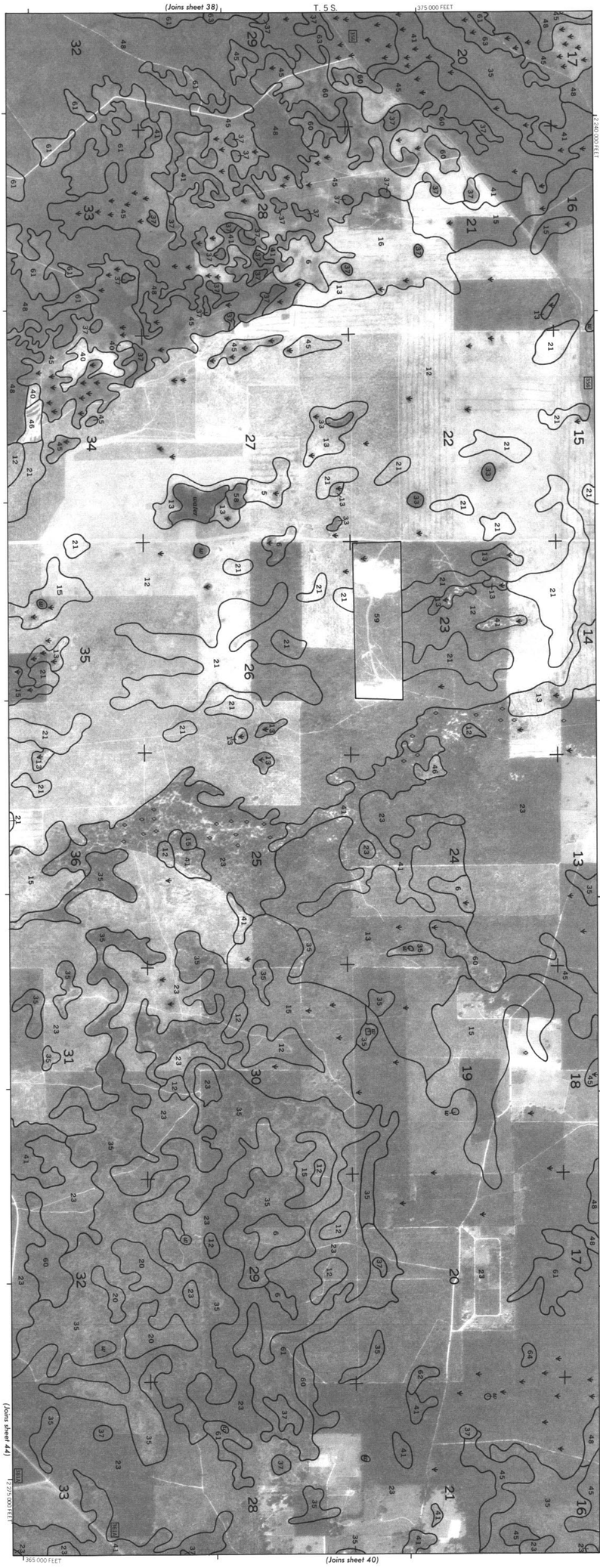



TAYLOR COUNTY, FLORIDA NO. 38

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Basemaps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 39

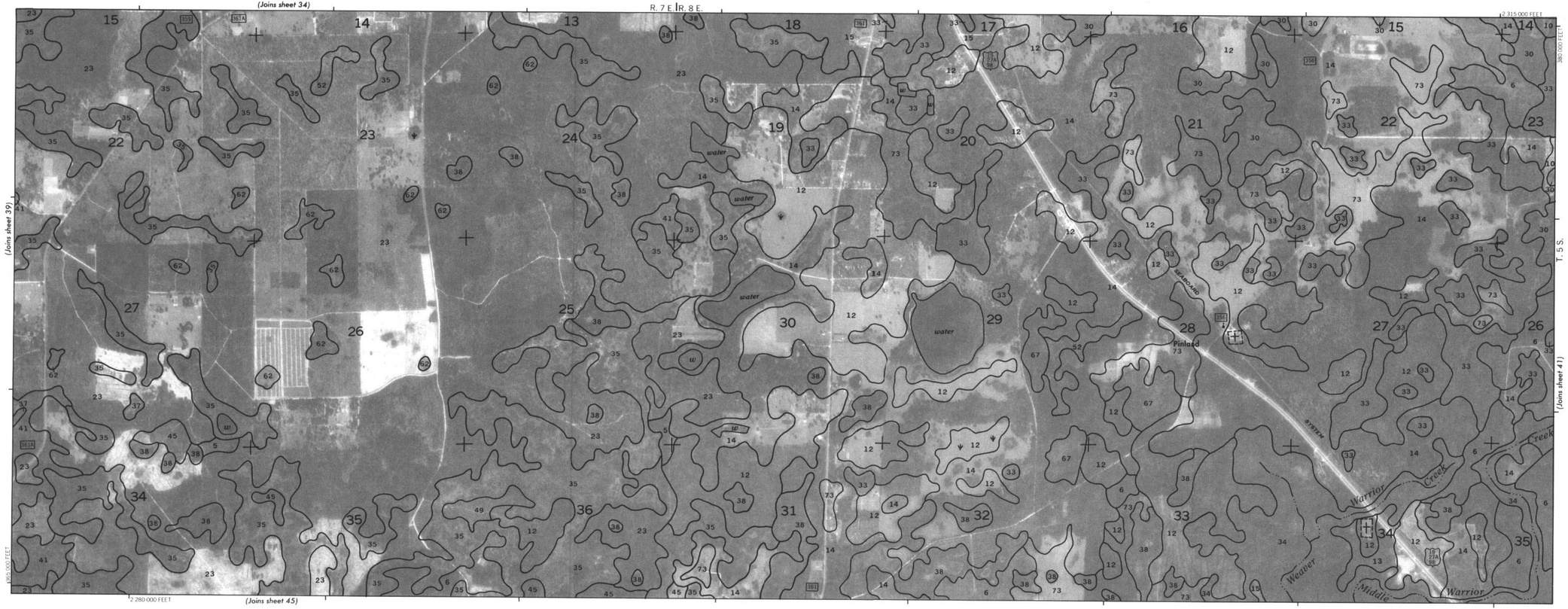



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 39

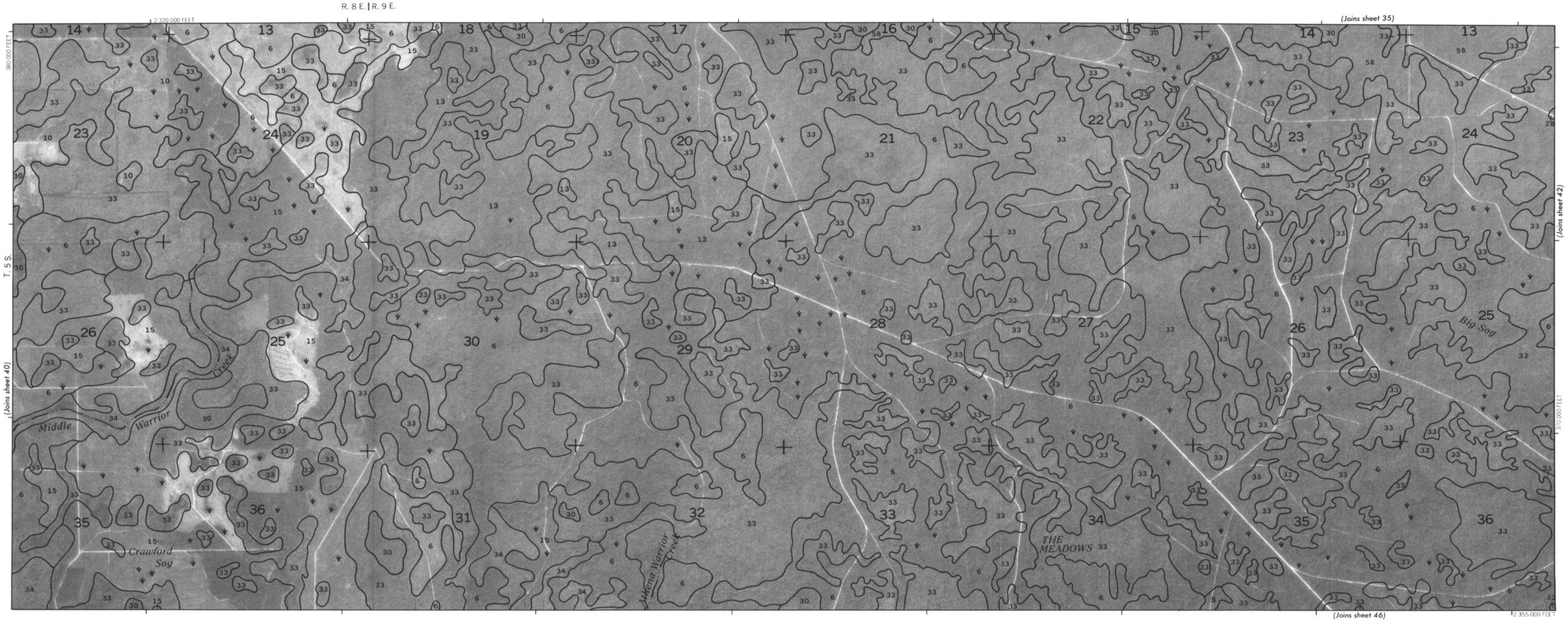



TAYLOR COUNTY, FLORIDA NO. 40

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

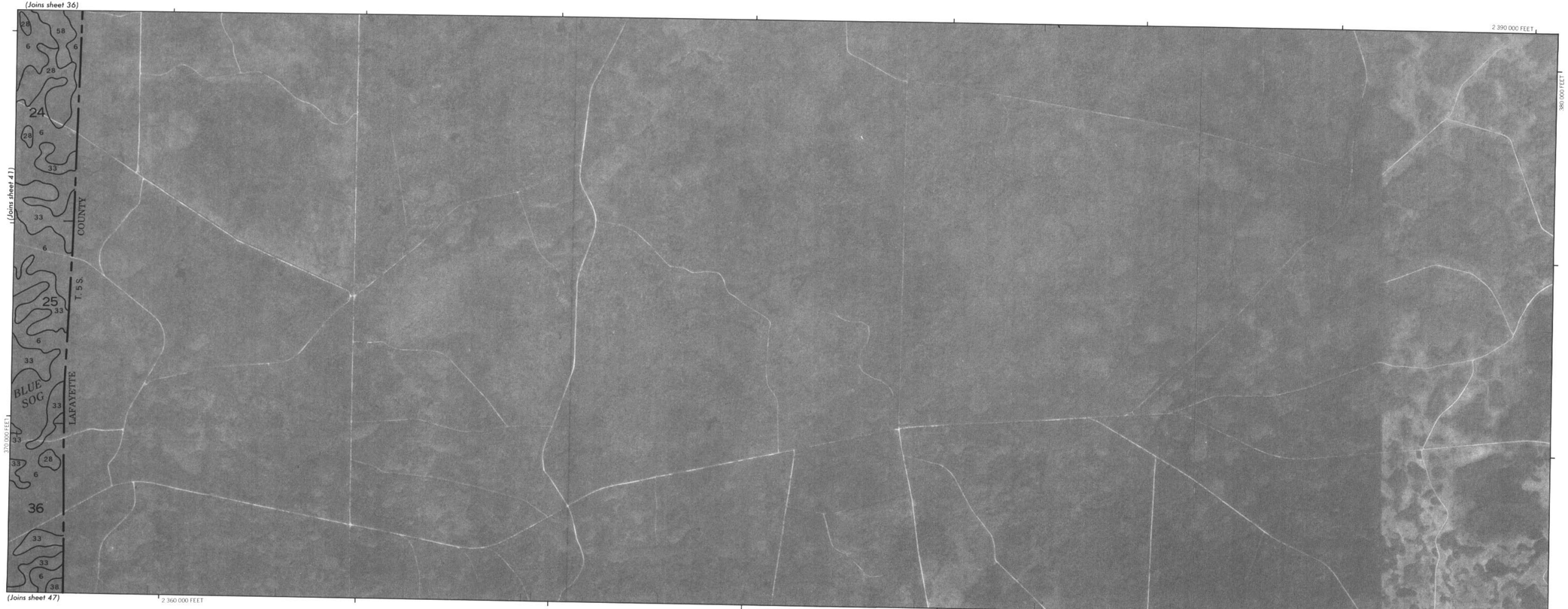
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 41



42

N



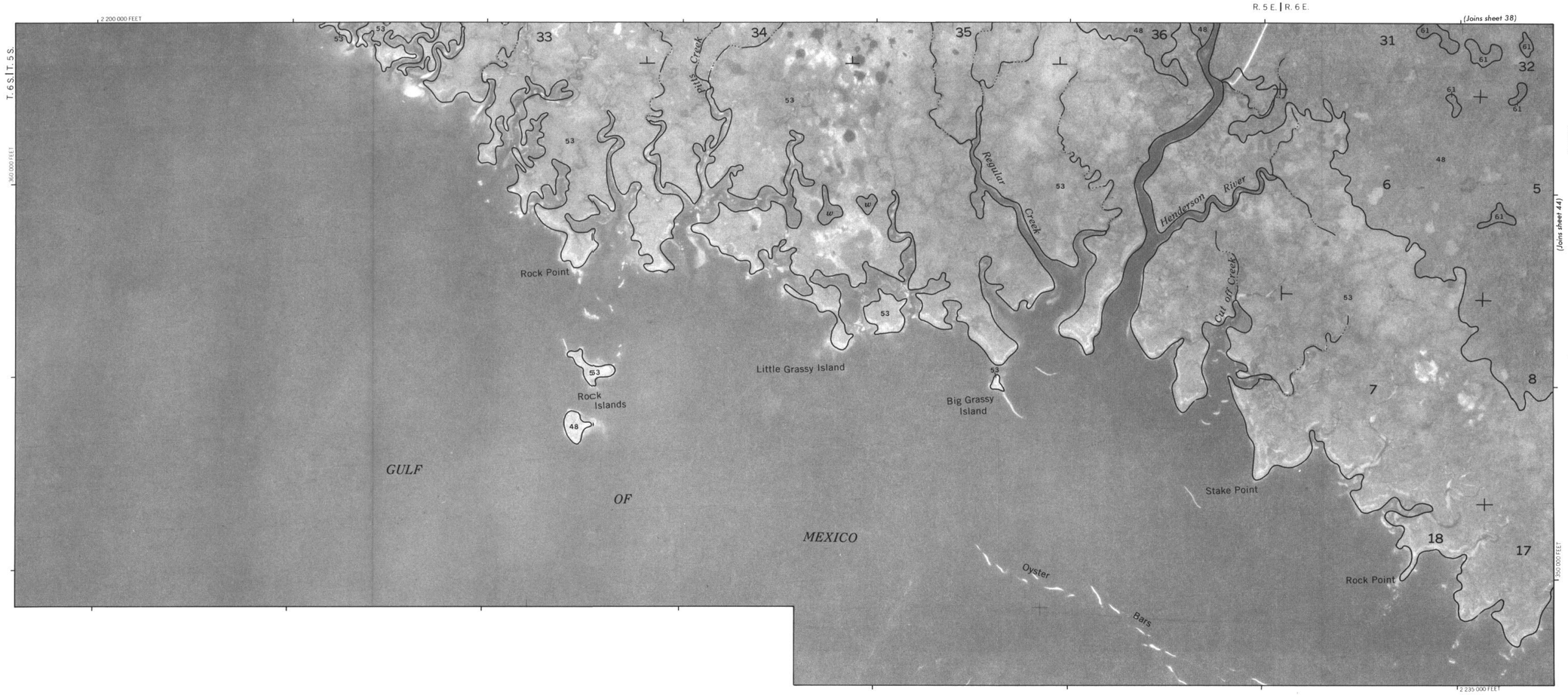

2 MILES
2 KILOMETERS
1
1
0
0
1/4
0.5
1/2
1
3/4
1

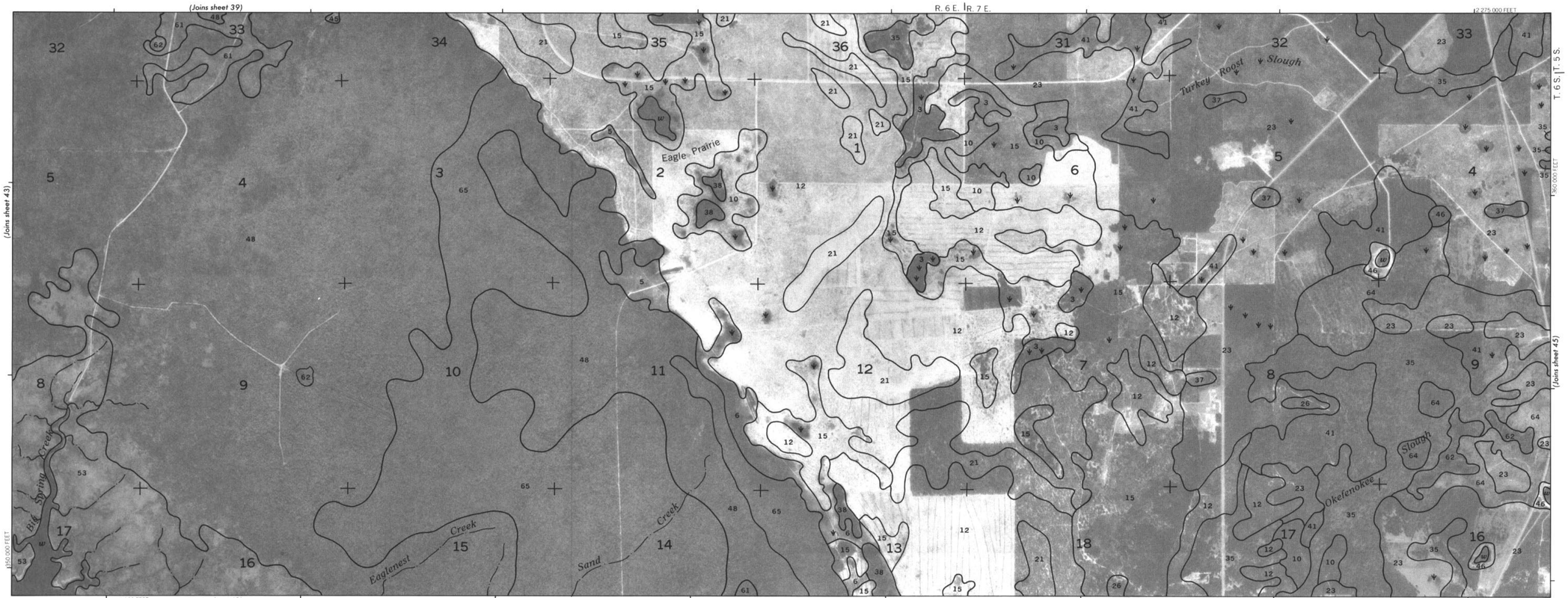
TAYLOR COUNTY, FLORIDA NO. 42

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

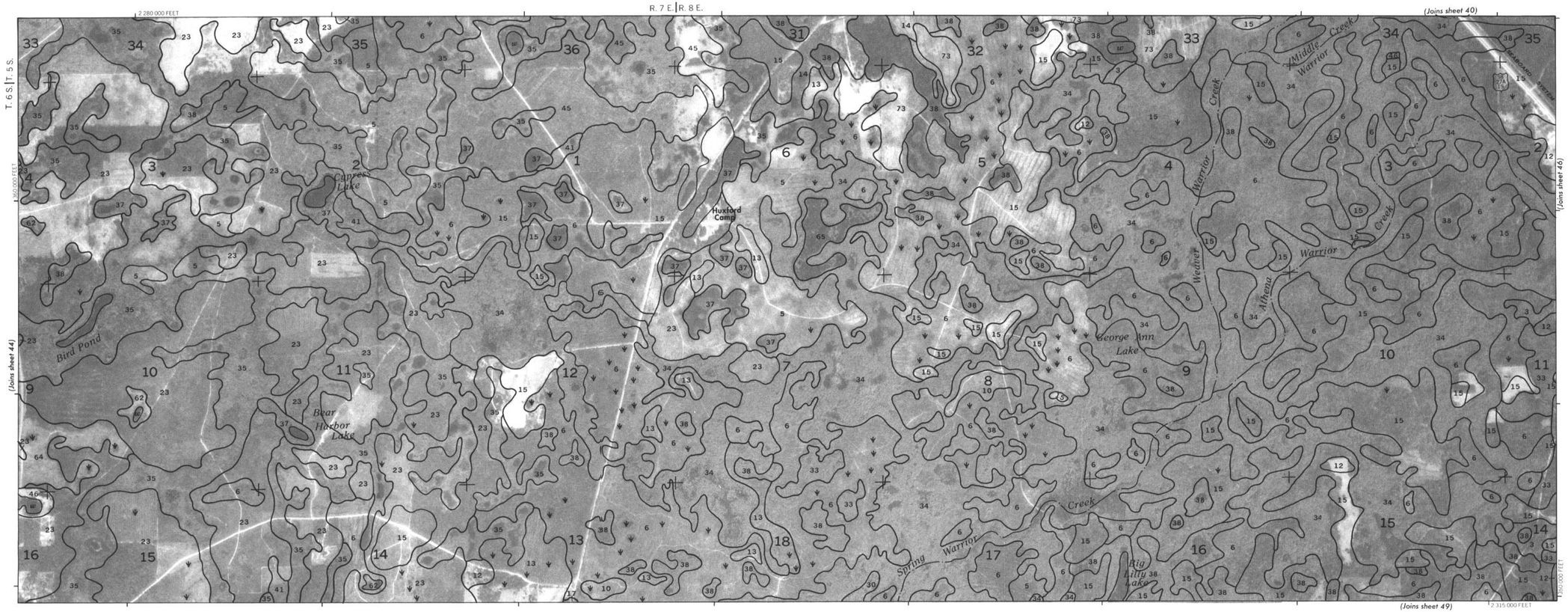
TAYLOR COUNTY, FLORIDA NO. 43





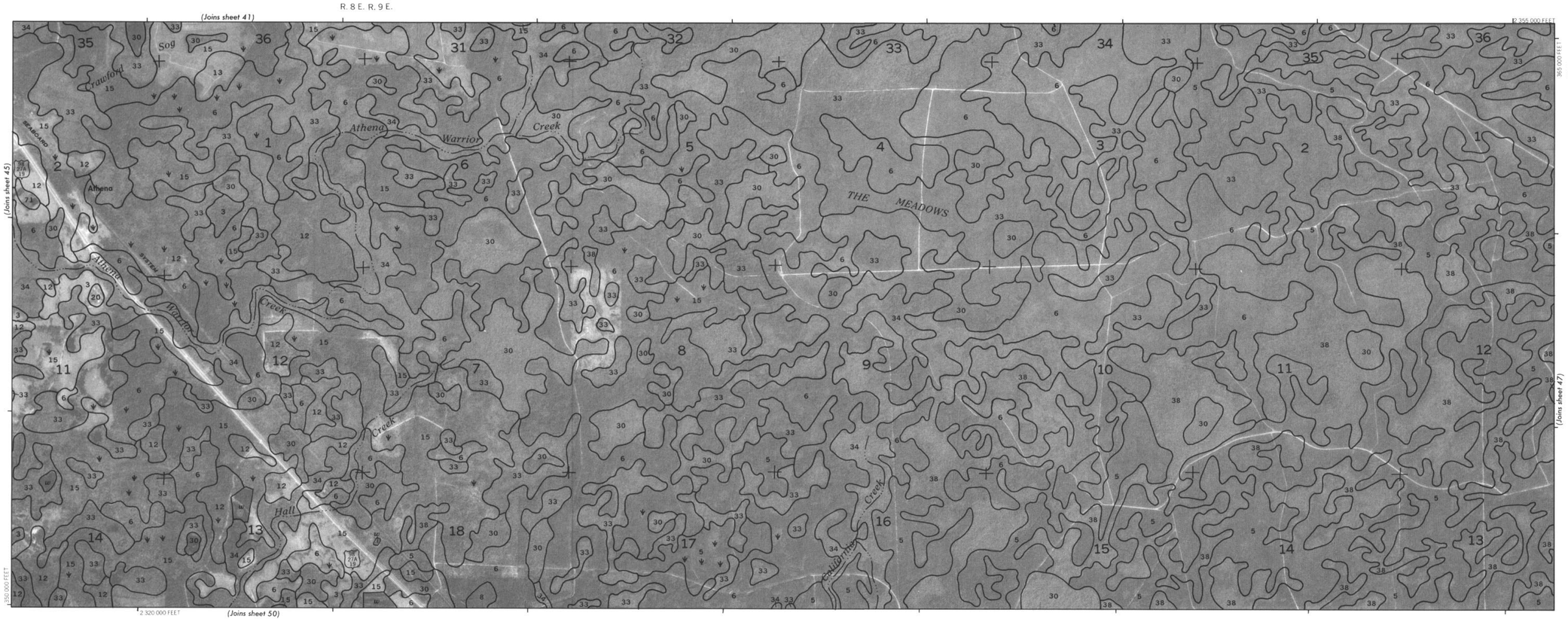

TAYLOR COUNTY, FLORIDA NO. 44

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are orthophotographic products produced by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 45




TAYLOR COUNTY, FLORIDA NO. 46

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

N

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 47

R. 9 E.

(Joins sheet 42)

T. 6 S. | T. 5 S.

2 360 000 FEET

365 000 FEET

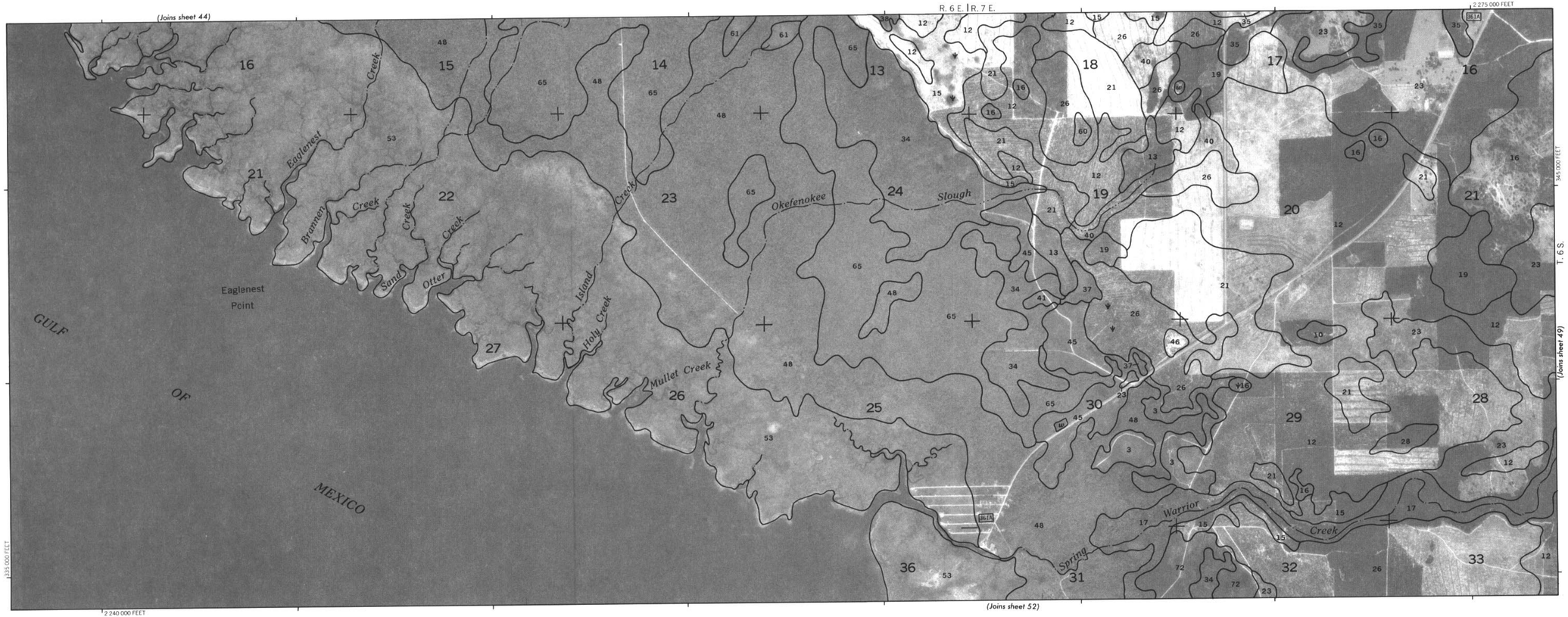
(Joins sheet 46)

(Joins sheet 51)

2 395 000 FEET

365 000 FEET

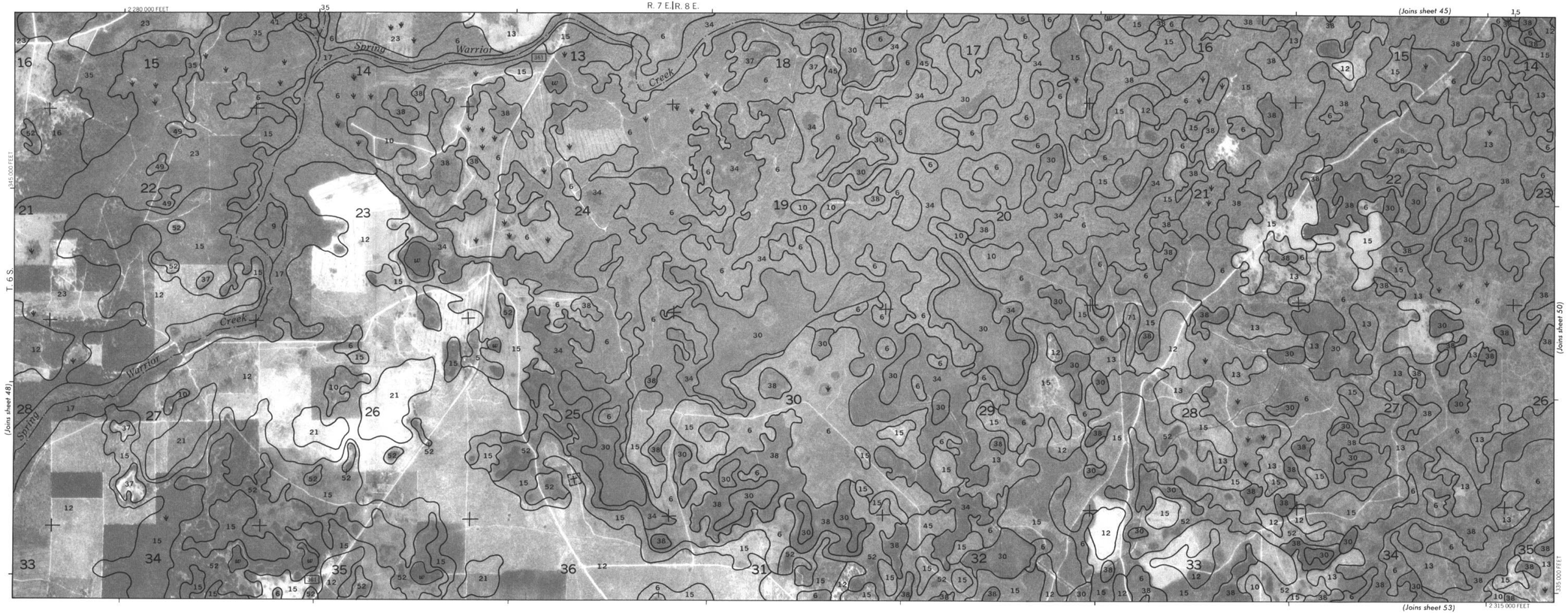
2 MILES
2 KILOMETERS
0
1
1/4
0.5
1/2
1
3/4
1




TAYLOR COUNTY, FLORIDA NO. 48

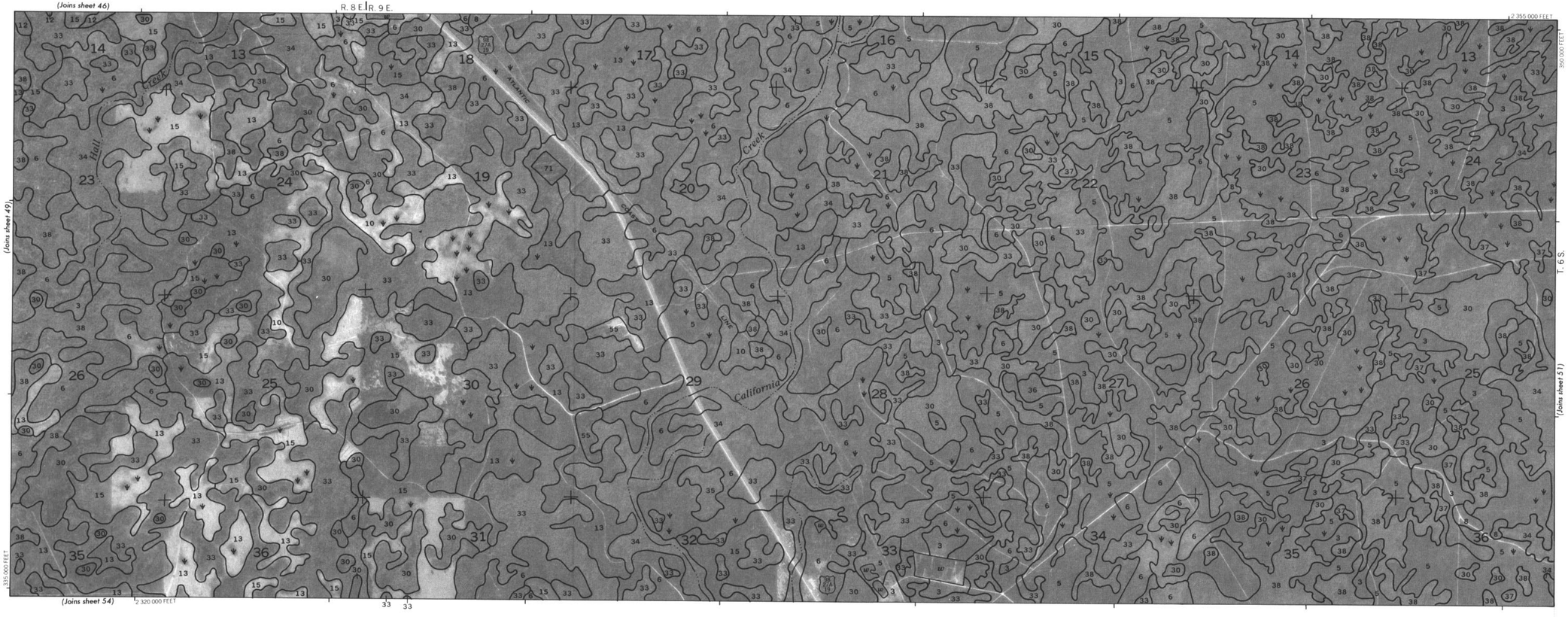
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are photomosaics prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately position_d.

N




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 49

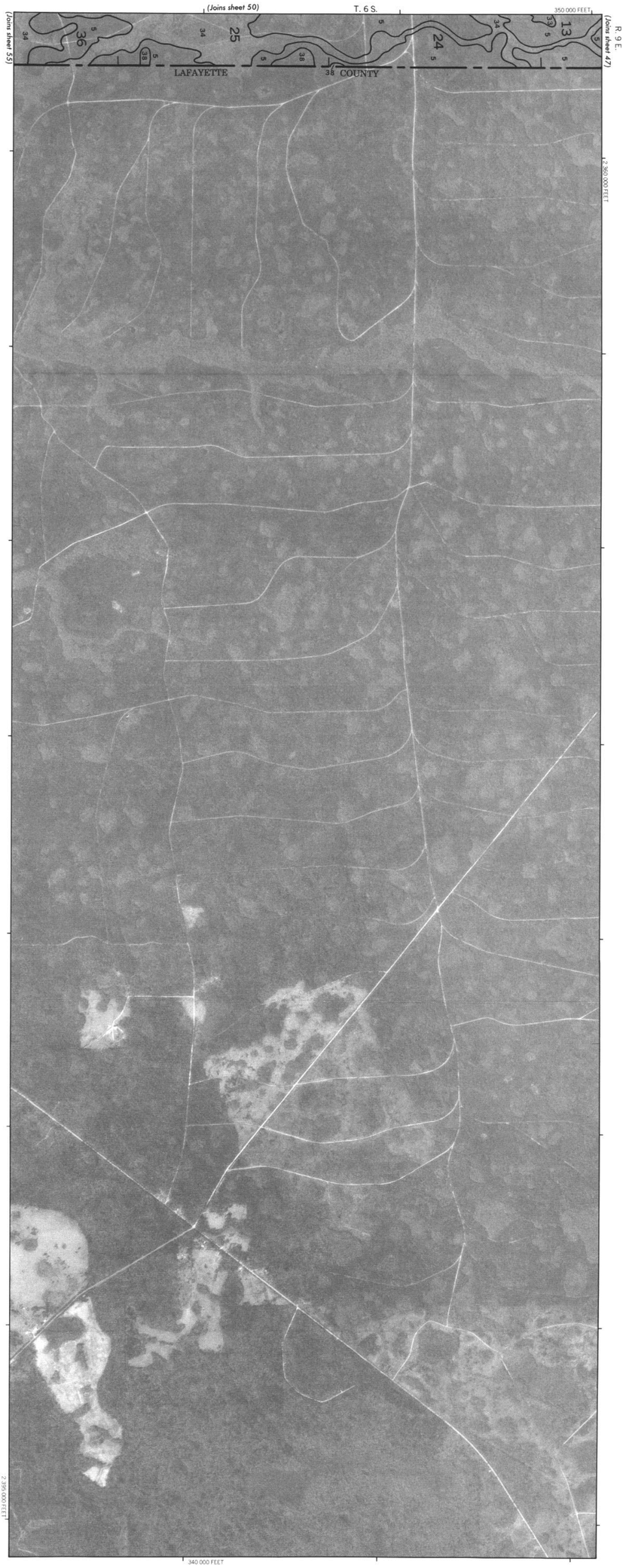



TAYLOR COUNTY, FLORIDA NO. 50

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately position...

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 -1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

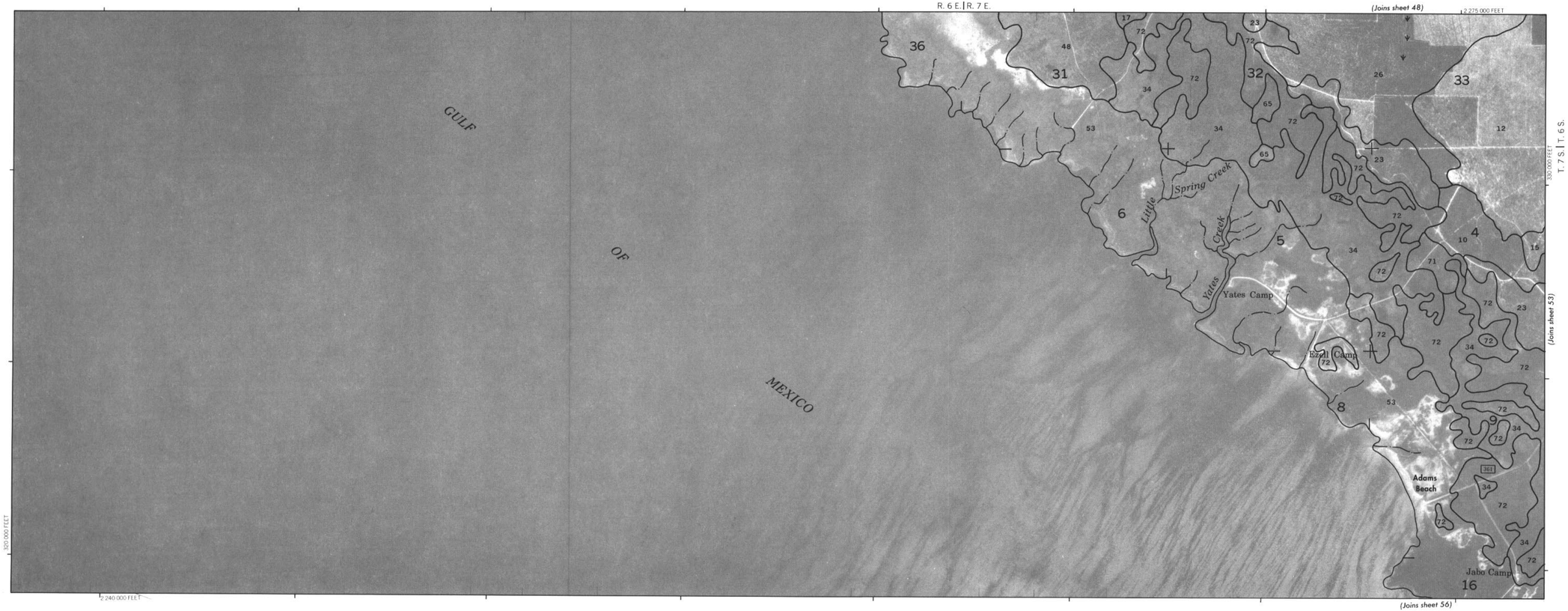
TAYLOR COUNTY, FLORIDA NO. 51




1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N




TAYLOR COUNTY, FLORIDA NO. 52

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photographs. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

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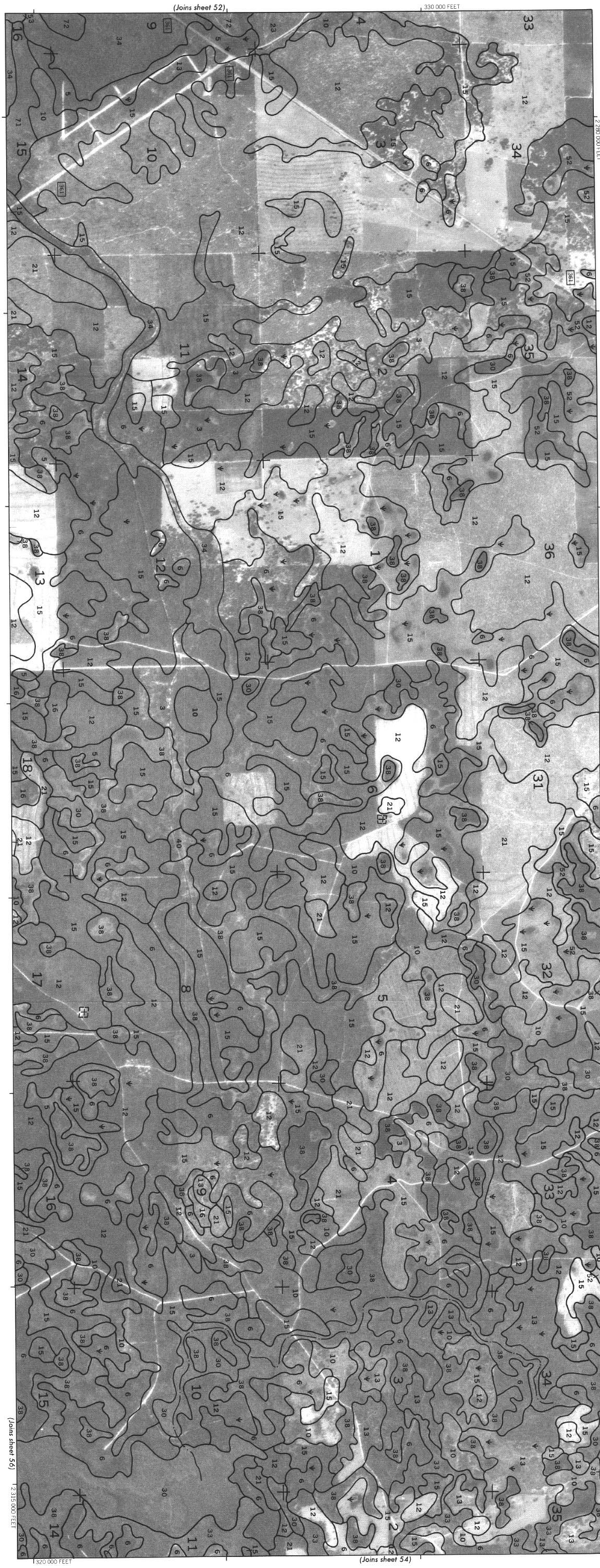
TAYLOR COUNTY, FLORIDA — NO. 53

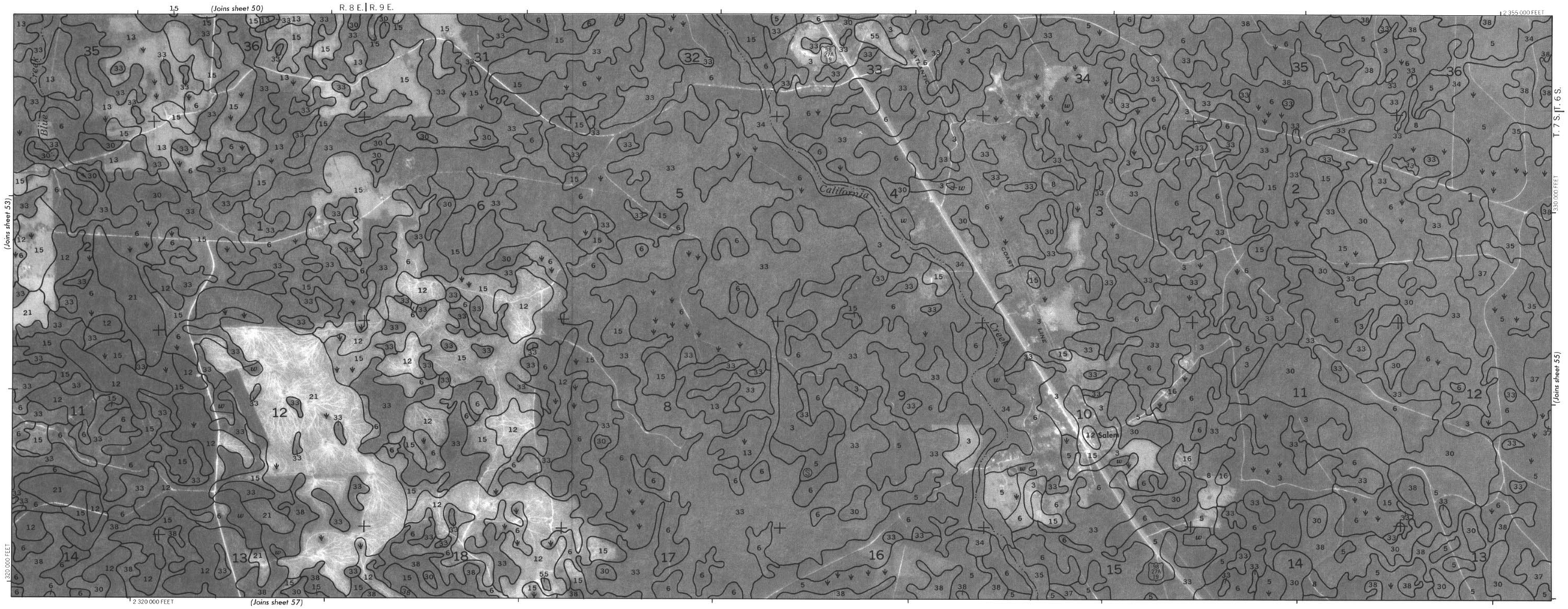
T. 7 S. | T. 6 S.




1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

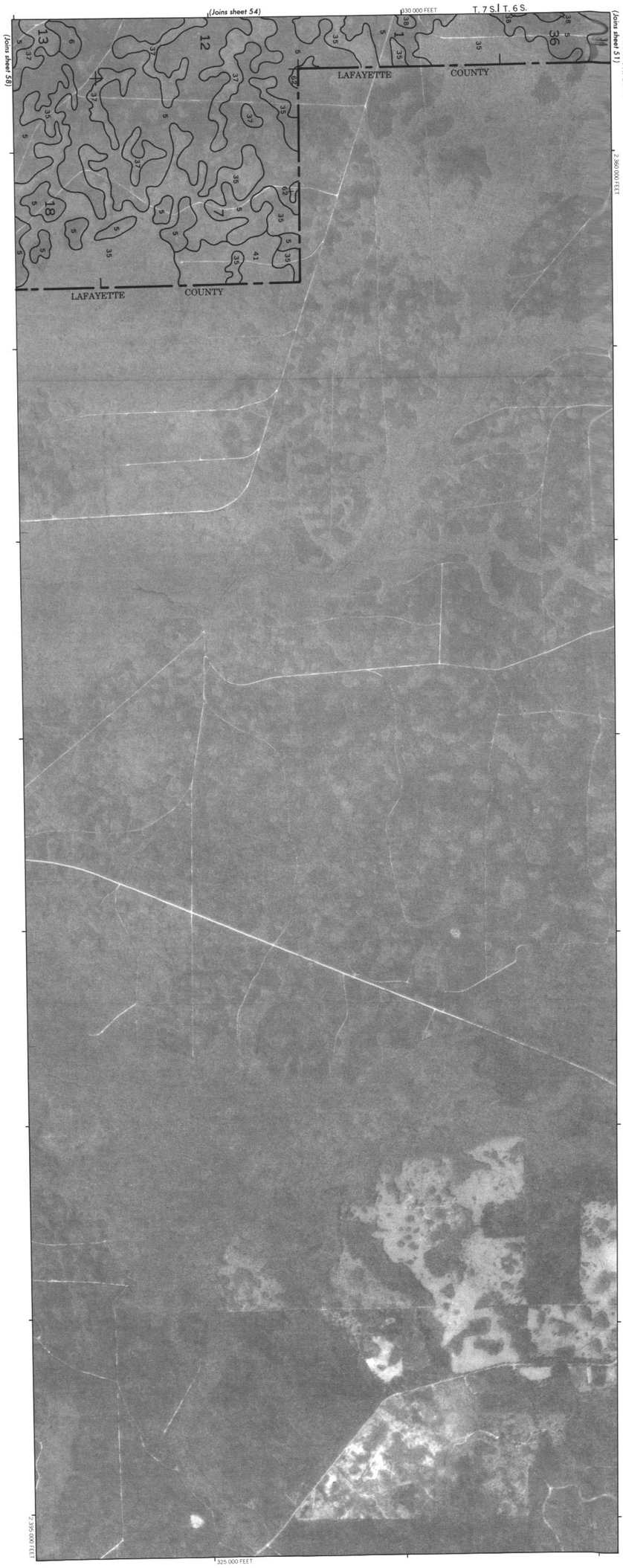



TAYLOR COUNTY, FLORIDA—NO. 54

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 55

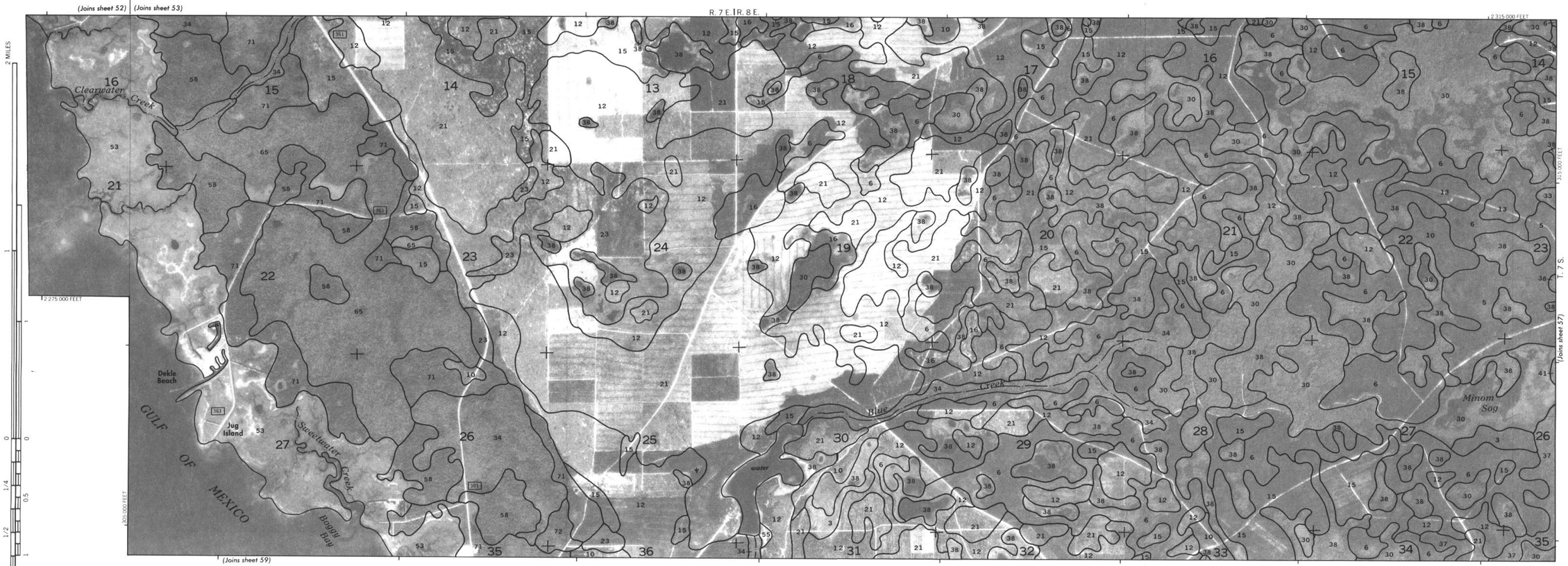



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

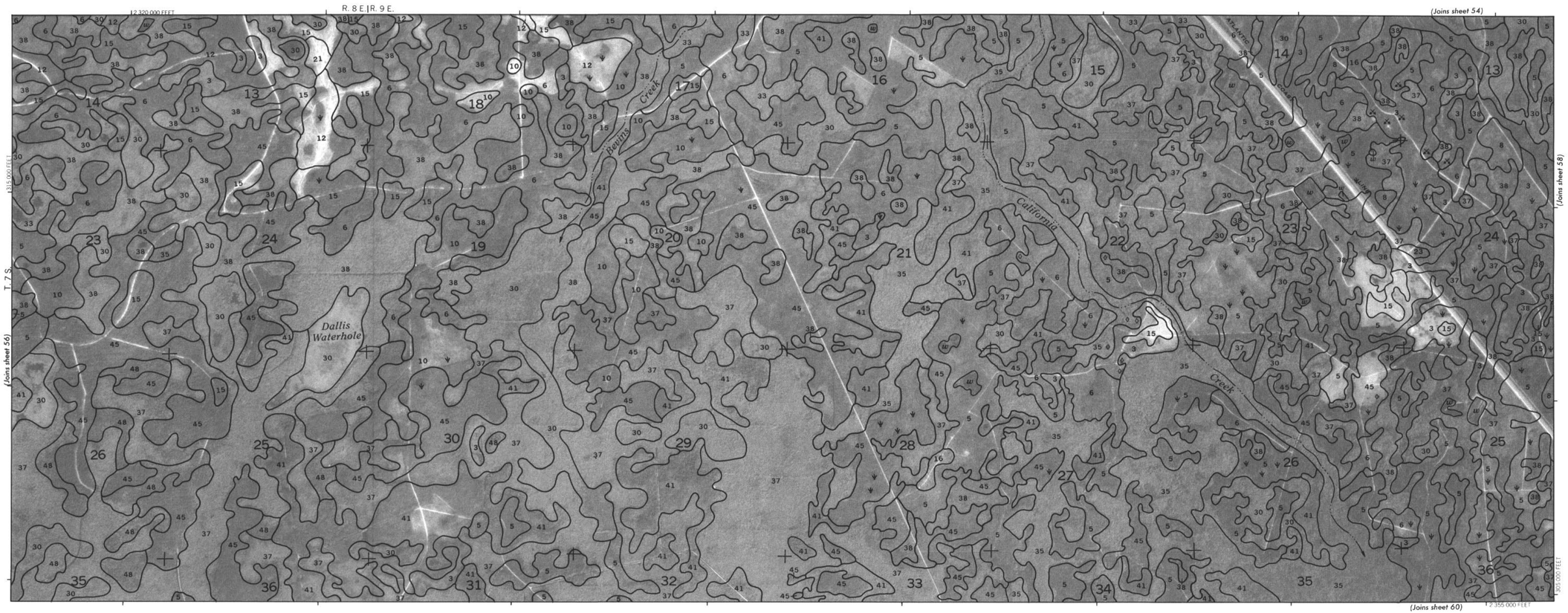
SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 55

N




TAYLOR COUNTY, FLORIDA NO. 56

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 57

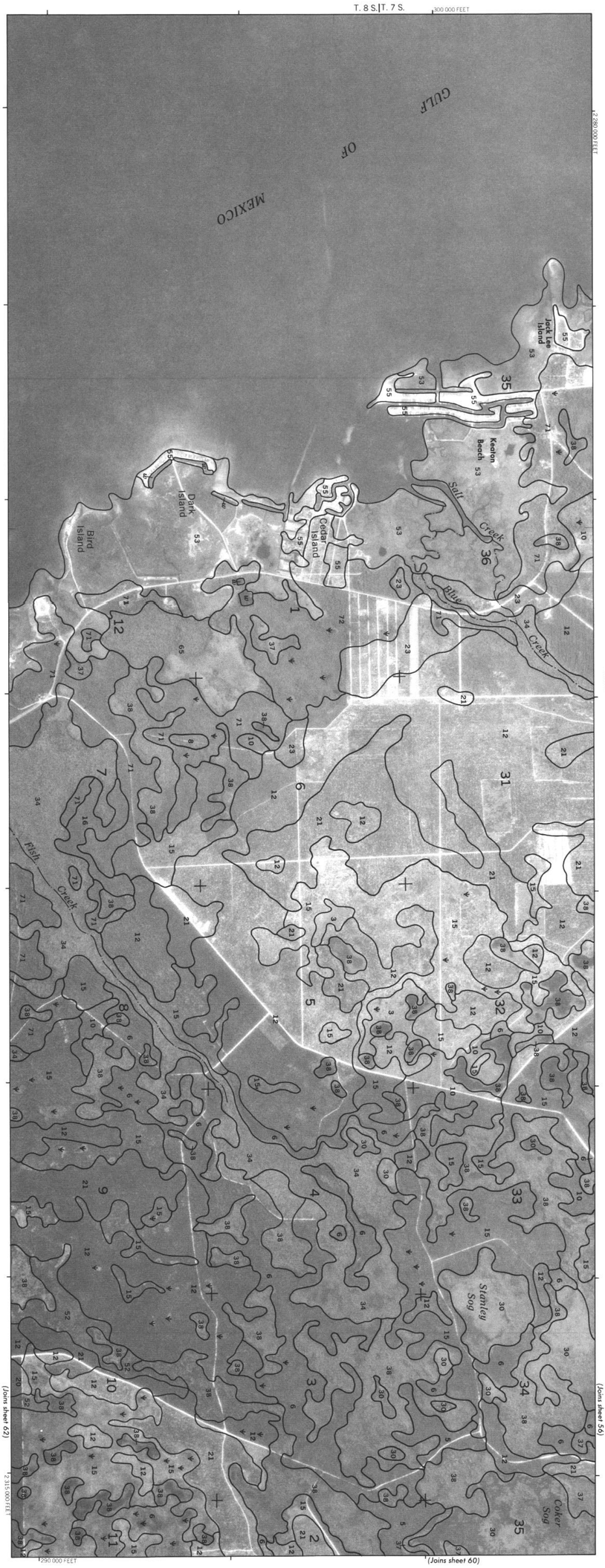
SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 58

TAYLOR COUNTY, FLORIDA NO. 58

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 59

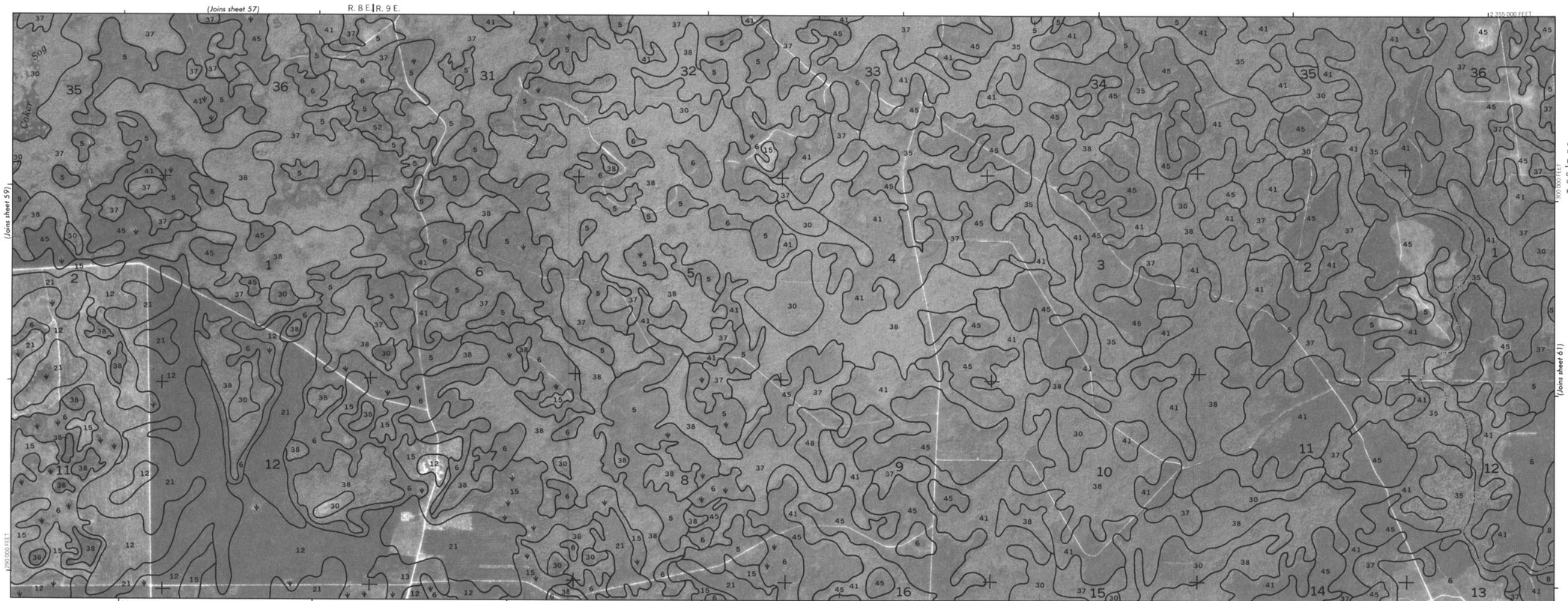



1 3/4 1/2 1/4 0 1 2 MILES

1 0.5 0 1 2 KILOMETERS

N

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 59

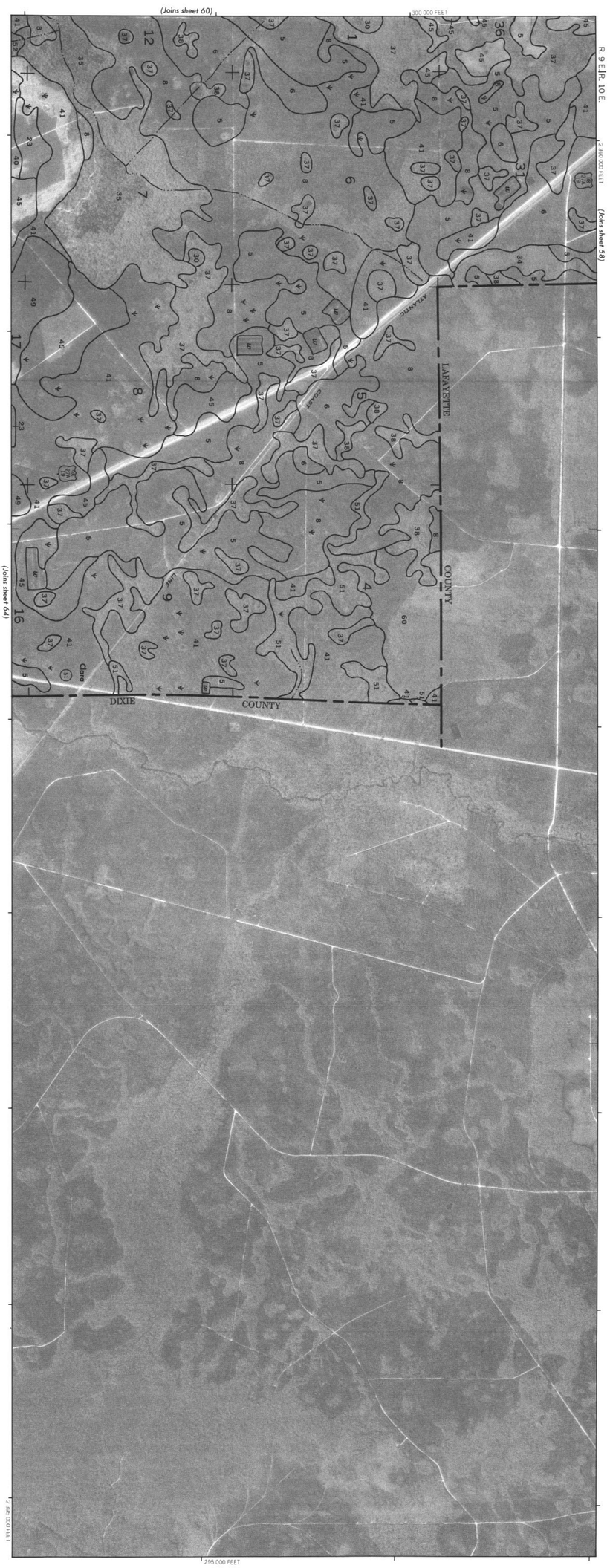



TAYLOR COUNTY, FLORIDA NO. 60

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

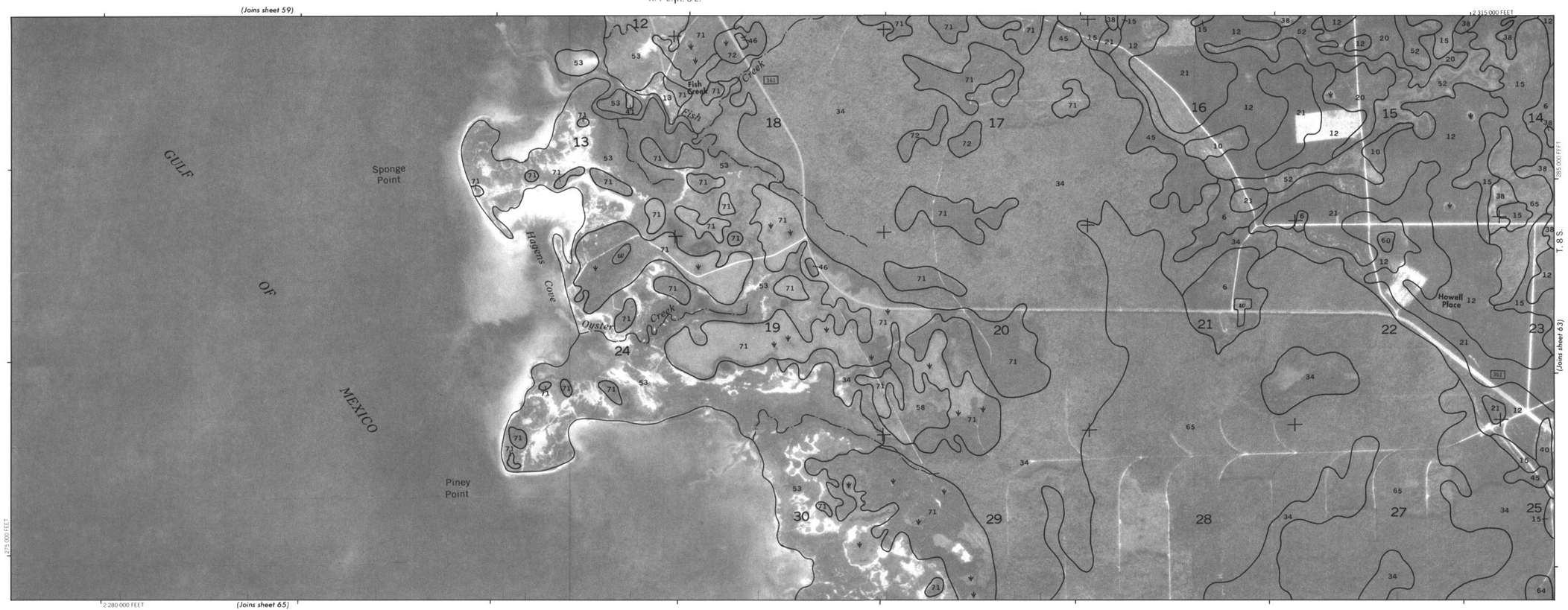
TAYLOR COUNTY, FLORIDA NO. 61




1 3/4 1/2 1/4 0 1 2 MILES

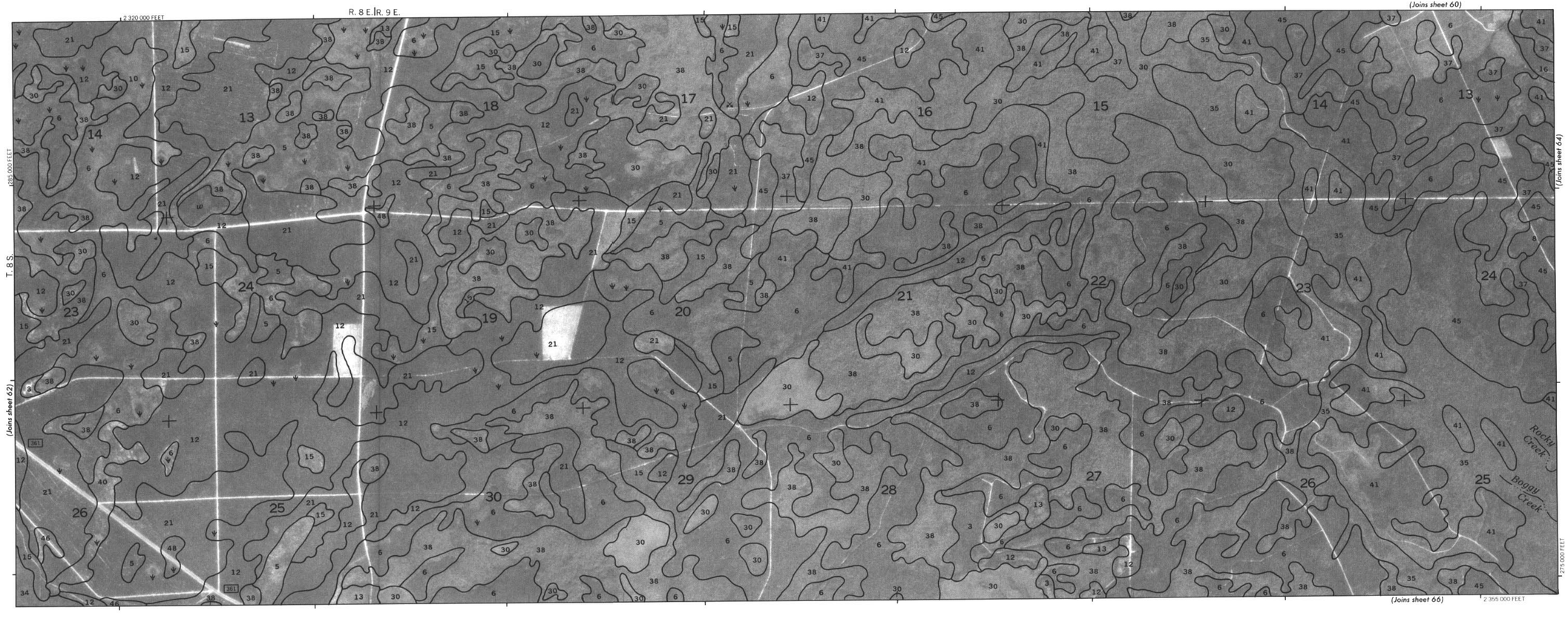
1 0.5 0 1 2 KILOMETERS

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 61



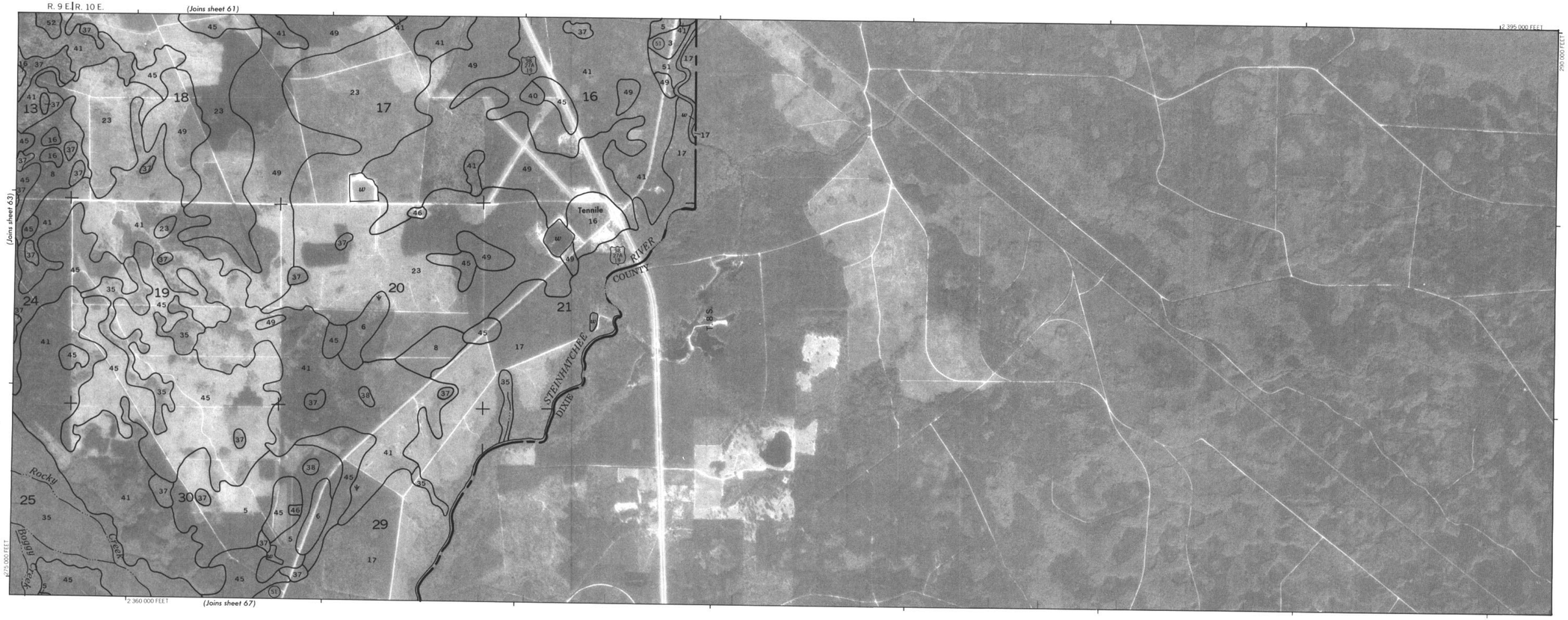

TAYLOR COUNTY, FLORIDA NO. 62

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately posit ed.




This survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 63

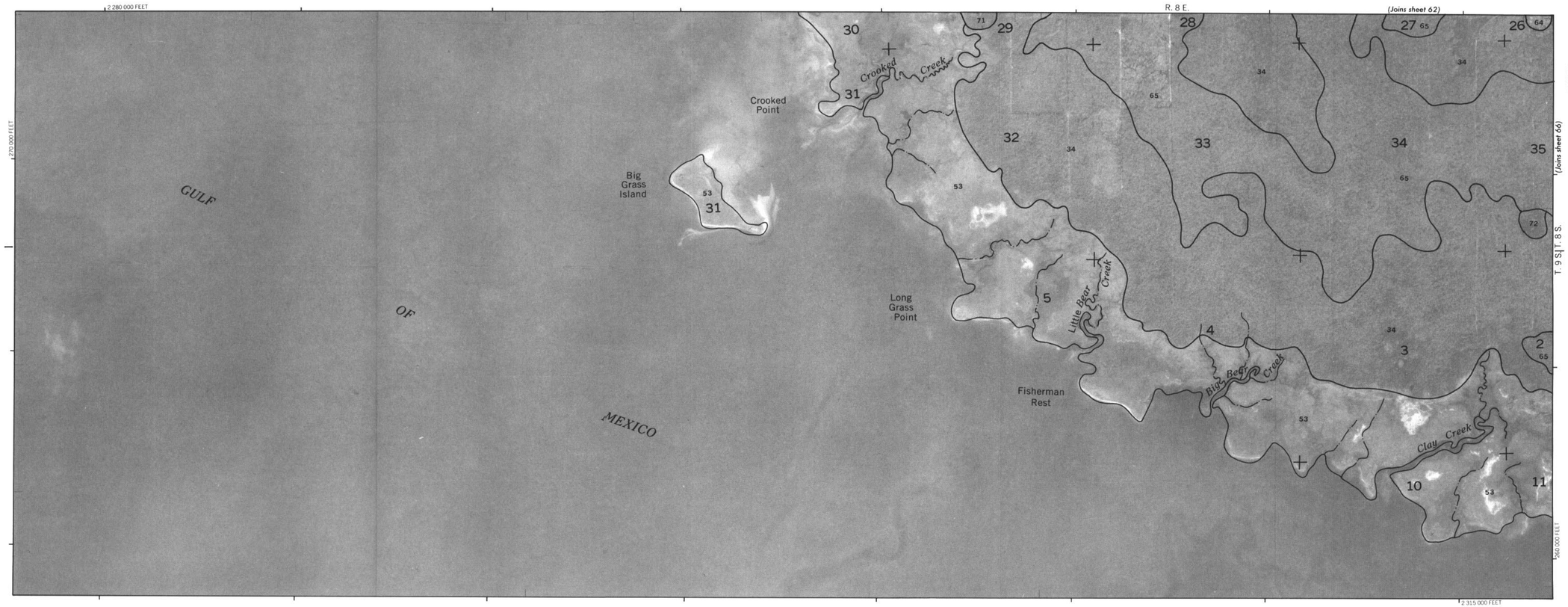



TAYLOR COUNTY, FLORIDA NO. 64

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Surve - from 1983-1988 aerial photo. Univ. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies.
Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 - 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

TAYLOR COUNTY, FLORIDA NO. 65



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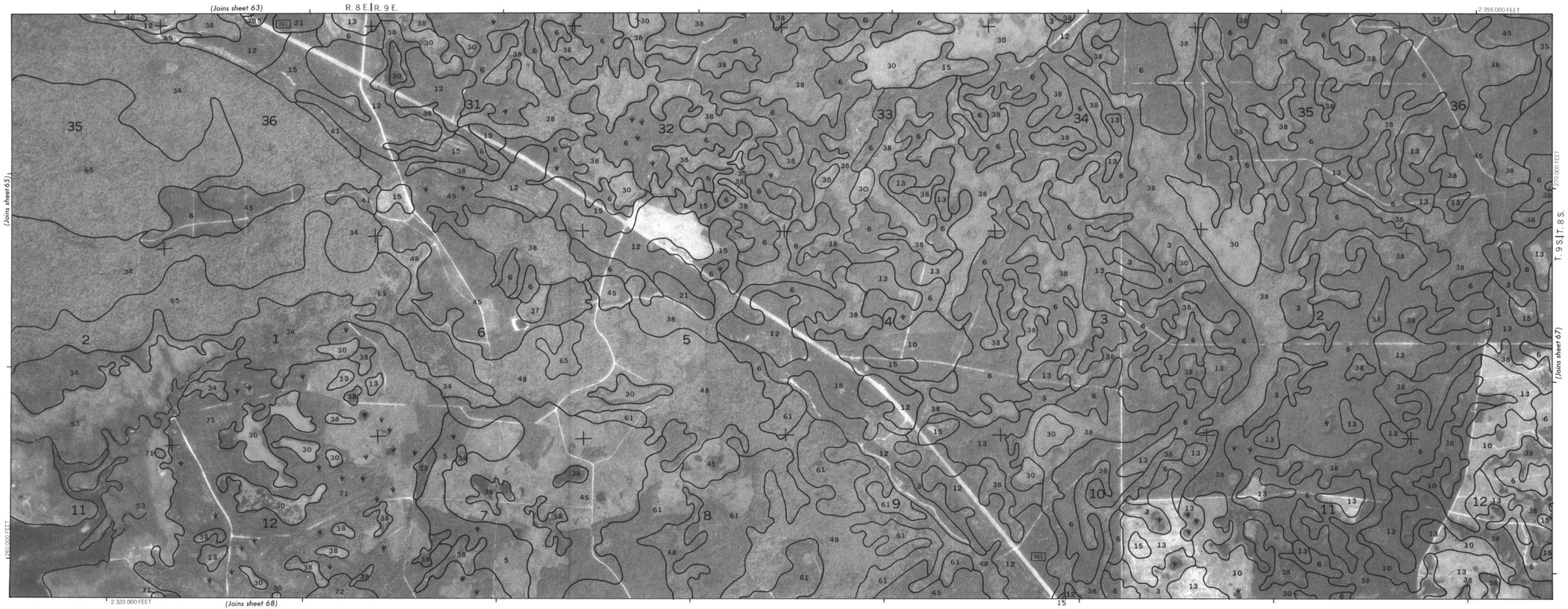


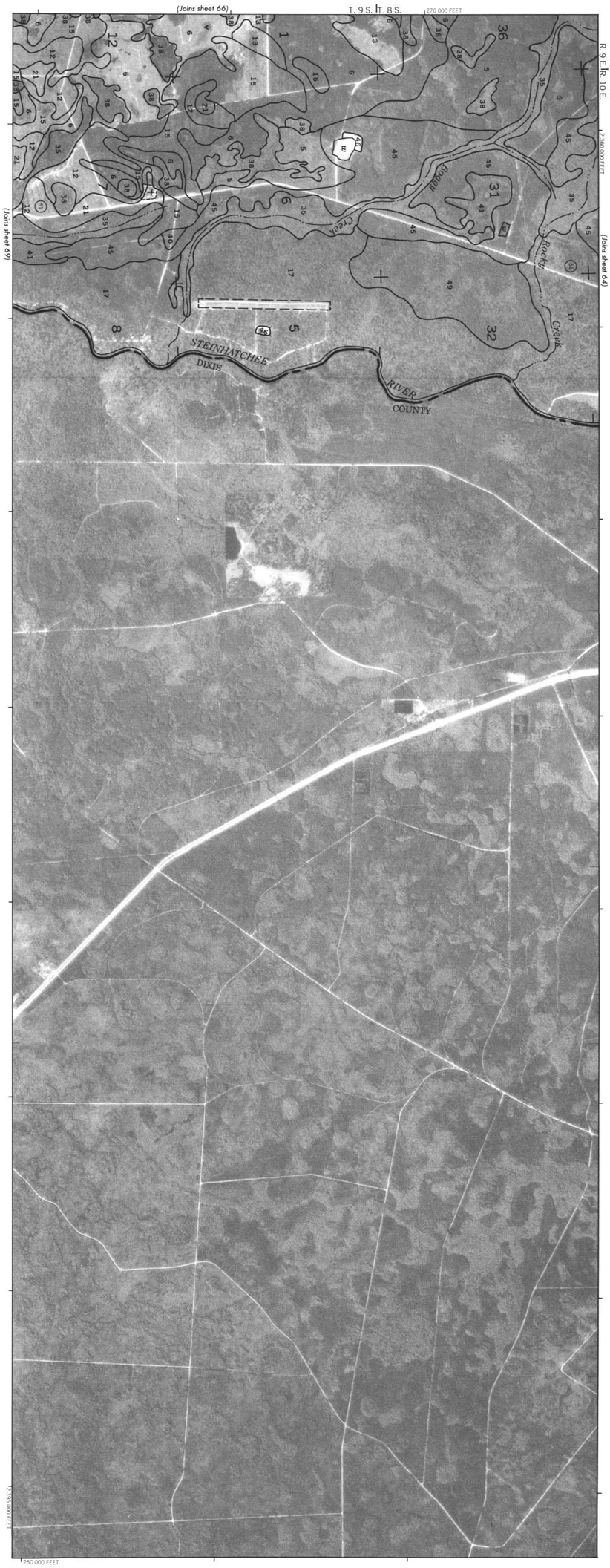

2 MILES
2 KILOMETERS
1
0
0
1/4
0.5
1/2
1
3/4
1

TAYLOR COUNTY, FLORIDA NO. 66

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. It was prepared by photomosaic methods from U.S. Department of Interior, Geological Survey aerial photographs taken in 1983-1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 -1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

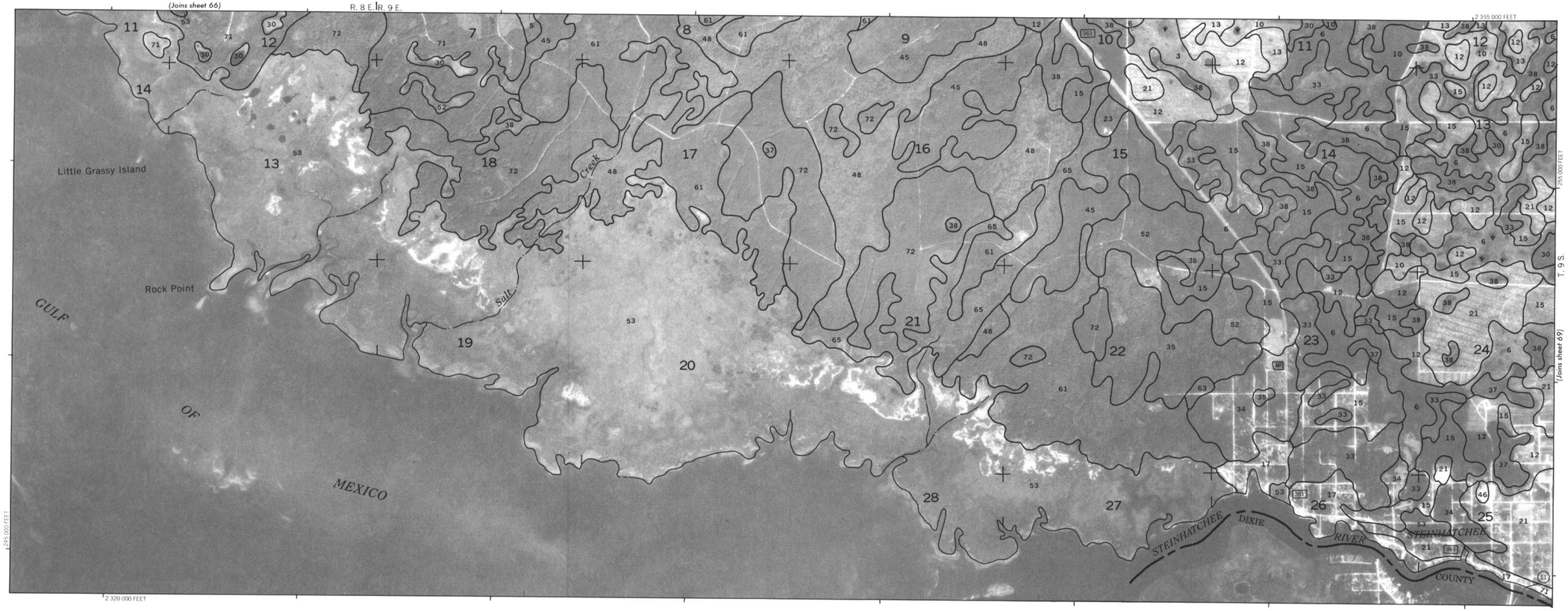
TAYLOR COUNTY, FLORIDA NO. 67




1 0 1 2 MILES

1 0 1 2 KILOMETERS

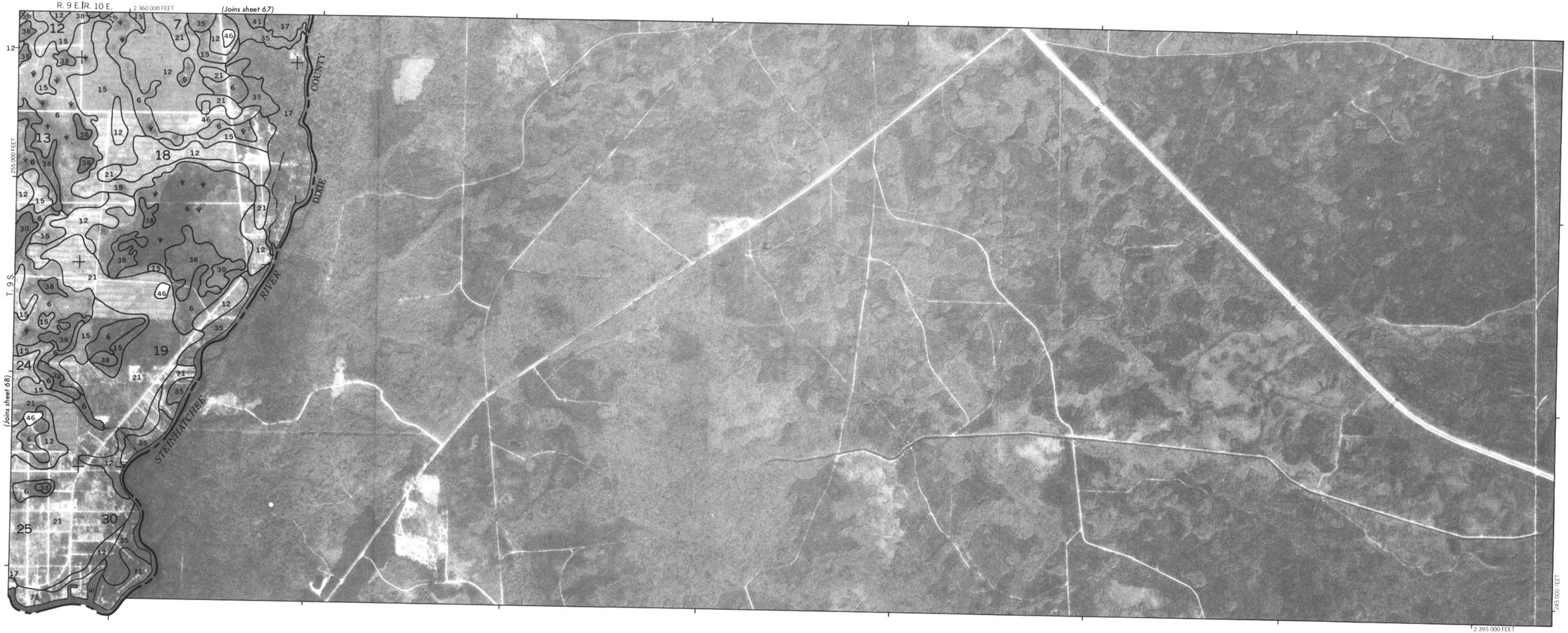
N




TAYLOR COUNTY, FLORIDA NO. 68

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1983 1988 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately posit- ed.

SOIL SURVEY OF TAYLOR COUNTY, FLORIDA — SHEET NUMBER 69

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TAYLOR COUNTY, FLORIDA NO. 69